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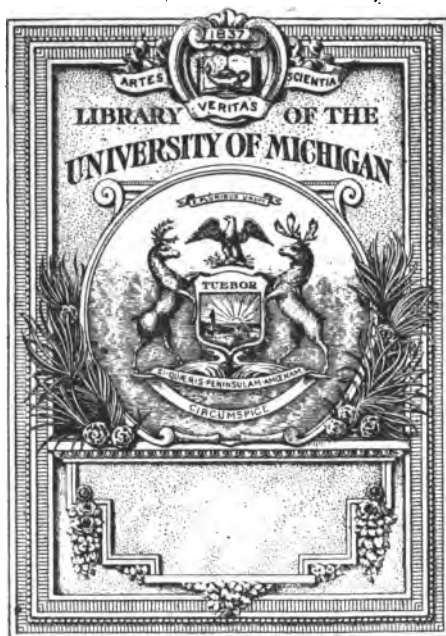
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PUBLIC ELEMENTARY SCHOOL CURRICULA

**A Comparative Study of Representative Cities of
the United States, England, Germany
and France**

**BY
BRUCE RYBURN PAYNE.**

Submitted in Partial Fulfilment of the Require-
ments for the Degree of Doctor of
Philosophy, in the Faculty of
Philosophy, Columbia
University.

**NEW YORK
1905**

Stine

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PREFACE.

This study attempts to give an exact description of the subject matter and its arrangement in the curricula of public elementary schools of certain representative cities in the United States, England, Germany and France. Adherence to this definite problem led chiefly to a comparative study of the actual and relative time assigned to subjects in schools and in grades.

Hearty acknowledgment of indebtedness to the writings, lectures and personal suggestions of Dr. Nicholas Murray Butler, Dr. John Dewey, Dr. Charles McMurry, Dr. E. T. Thorndike, Dr. Paul Monroe, Dr. J. A. McVannel, and Dr. F. M. McMurry is hereby made. The influence of the thought of these gentlemen will be readily recognized in the following pages. Especially serviceable have been the suggestions of Dr. Frank M. McMurry, under whose kindly guidance the research was pursued for two years. Without his encouragement it is probable that the arduous task of collecting and organizing the material would have been abandoned before it reached its present form.

Space is not allowed for the acknowledgment of the kindness of many persons who lent valuable assistance in collecting data for this study. It would be an act of unpardonable ingratitude, however, not to record the thanks due Miss Elizabeth Baldwin, Librarian of Teachers College, whose wide experience in collecting such material made her peculiarly able to give that aid which she so ungrudgingly rendered while the source material for this study was being gathered.

The sources of information in the study of the American elementary schools were the printed syllabi of the Superintendents of Schools, supplemented and corrected, when the case demanded, by the written statements of the Superintendents themselves, to many of whom I am indebted for such kindness. The Reports of the Commissioner of Education and personal letters from him and his staff were of valuable service.

The study of the curriculum in the schools of England is much more exhaustive than that of the other countries, because so little has been printed on the subject in America that a more extensive treatment was required. Through the kindness of Mr. A. E. Twentyman, Assistant Director of Special Inquiries and Reports of the Board of Education of England, and of Dr. Thistleton Mark, Head of the Department of Education at Victoria University, Manchester, there were collected seventy-eight syllabi of educators and Inspectors of the English Government. These furnished a valuable source for research.

Among other sources of information to be mentioned are:

(1) The National Union of Teachers' edition of the Code for 1903, London; (2) Statistics of Public Elementary Schools of England for 1902-1903, Eyre & Spottswood, London; (3) The Provisional Code of Regulations for the Public Elementary Schools and Training Colleges, Eyre & Spottswood; (4) Revised Instructions applicable to the Code of 1902; (5) The Elementary Education Acts for England and Wales from 1870-1902, London, 1903; (6) Reports of the School Board of London to July, 1904.

I am indebted to Gabriel Compayré, Rector of the Academy of Lyons, France, for suggestions and references, and for a copy of the twelfth edition of his splendid contribution upon French Education, "Organisation Pédagogique, et Législation des Écoles Primaires," Paris, 1904, which has furnished valuable help in this work.

L. Bedorez, Director of Primary Instruction of the Depart-

ment of the Seine, likewise, has been ever courteous, sending reports of the schools of his department. Among them are:

(1) Ville de Paris,—Les Écoles et les Oeuvres Municipales d'Enseignement, 1871-1900; (2) Règlement des Écoles Maternelles Publiques du Département de la Seine, Paris, 1896; (3) Note sur les Établissements Publics d'Enseignement Primaire à Paris, Dec., 1903; (4) Règlement pour les Écoles Publiques, Paris, 1899; (5) Arrêté No. 4362 Conseil du Département de la Seine, 1898.

The laws which prescribe the course of instruction for the Elementary Schools and Kindergartens of France were taken from:

Plan d'Étude des Écoles Primaires Élémentaires (Collection Delalain No. 65) and from Plan d'Étude des Écoles Maternelles Publiques (Collection Delalain No. 66), both by Delalain Frères, Paris, 1904.

Acknowledgment is most gratefully made to Gymnasialdirektor Dr. Hugo Lemcke of Stettin, Prussia, who, through his experience as a German school official, was able to steer me clear of much research which otherwise would have been necessary. His tireless efforts in collecting and forwarding programs and syllabi made the present study of the curriculum of German schools possible.

Other sources are:

(1) Das öffentliche Unterrichtswesen Deutschlands in der Gegenwart von Dr. Paul Stötzner, Leipsic, 1901; (2) Grundlehrplan der Berliner Gemeindeschule, Berlin, 1902; (3) Allgemeine Bestimmungen des Ministers der geistlichen Angelegenheiten vom 15 Oktober, 1872.

Besides the foregoing primary sources, the following secondary material has been found serviceable:

(1) Special Reports on Educational Subjects, eleven volumes, compiled for the Board of Education of England, under the supervision of Michael E. Sadler, Director of Special Inquiries and Reports for Great Britain (referred to as E. R.); (2) Reports of the Commissioner of Education of the United States (referred to as C. R.); (3) The Making of Citizens,—a Study in Comparative Education, by R. E. Hughes, Scribners, 1902. This book deals minutely with the educational systems

of America, England, Germany and France; (4) Elementary Education in France, by T. H. Teegan, 1891; (5) French Schools through American Eyes, by J. R. Parsons, 1892; (6) Prussian Schools through American Eyes, by J. R. Parsons, (7) Method in the Schools of Germany, by J. T. Prince, 1891; (8) The German School System, by Levi Seeley, 1896.

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INTRODUCTION.

During the past twenty-five years of the progress of American education, one of the important problems of yearly recurrence has been how to improve the course of study in the elementary grades. Such improvement could be made both by means of changes in the nature of the subject matter itself, and by the suitable arrangement of the subject matter. Consequently, in a comparative study of the curricula of the elementary schools of the four progressive nations of the world, the United States, England, Germany and France, which are dealt with in this work, some of the questions of fundamental importance are: (1) What is the nature of the content of the curriculum? (2) What are the grades in which the various subjects are taught? (3) How much time is allotted to each subject both in the whole course and in each grade? (4) What is the relative importance attached to the various subjects of instruction by the leading educators of the four progressive school systems of the world?

Investigation of the four preceding questions ought to afford suggestions valuable in the solution of those educational problems which are of such pressing importance in America. Some of these problems are: (1) How can a closer relation in the course of study be secured, which shall make of the curriculum a unity rather than a mechanism of unrelated sections? (2) What administrative measures may be adopted in order to secure a greater uniformity between the curricula of different city schools, so that a child in passing from one school to the other may not suffer the loss of

time and the difficulty of adjusting himself to a radically different course of study? (3) How may the curriculum of the sub-primary school or kindergarten be adjusted to that of the primary school? (4) Is the length of the daily school session what it should be? (5) Can there be suggested a satisfactory system of electives among the studies of the elementary school? (6) Can a plan be discovered by which Bible instruction may be introduced into the schools of America without seriously infringing the spirit of our democratic institutions? (7) How may the health and physical development of the child be more adequately provided for? To contribute something toward the answering of these questions, the present research was undertaken. Various other questions will be discussed as they are suggested by the data. (See pp. 14 and 36.)

In order to properly present the vast amount of material found in the sources from which this study is drawn, it has been found necessary to make many brief summaries of the most essential facts. To this end sixty-three tables have been constructed. These supply to a great extent the data, the argument, and the conclusions of the discourse. Indeed, many of the tables should be regarded as epitomes of facts which are of primary importance in studying the various curricula prescribed by the best thinkers in the several progressive educational systems of the world. The tabular form is pursued because of its convenience, and because in this form the facts may be readily referred to, both for the present discussion and for such use as others may make of the data herewith correlated, much of which will not be found elsewhere in English.

One of the purposes of this work from its incipency has been to furnish in a usable form such facts about the public elementary curricula of the advanced city and state school systems of the world as would serve as a basis of comparison

to those persons who are responsible for the construction of curricula in cities and states of our own country. The facts summarized in these tables will suggest numerous questions of vital interest to students of the elementary school course of study. Such questions and suggestions as are brought up by study of these data will for the most part merely be stated here, and their further development left for the more pretensions discussions of other students of education.

The method of treatment pursued in tabulating the information is uniform and simple throughout. Each subject receives the same number to the left and occupies approximately the same position in each table. There are usually two tables on each page under one Roman number, the first table showing the minutes per week devoted to each subject in each grade, together with the percentage of total recitation time devoted to each subject, and the table at the bottom of the page giving the percentage of recitation time given to each subject in each grade. The purpose of this lower table of percentages is to afford the opportunity to translate the same relative time allotments to any other curriculum, in case one should agree to the relative time allotments but, for practical reasons, could not consent to the actual time allotments. The most important item of the upper table is shown in the last column to the right where the percentage of the total school time given to any subject is calculated. After the curricula of ten cities in each country have been subjected to the foregoing analysis, there are two tables given which summarize the items of the ten (see Tables XII., XIII., XXXVI., XXXVII., etc.). These show the average number of minutes per week and the average percentage of recitation time devoted to each subject in each grade, together with the relative percentage of total time given to each subject in the various cities, and the average relative percentage of total time. The purpose of these tables is to show the actual content and ar-

rangement of the curricula, also the relative importance attached to each subject by the educators of the United States, England, Germany and France, as shown by the actual practice. It is believed that such a display reveals a curriculum which in many respects differs from that ordinarily pictured in educational periodicals. Whether or not we are living up to the ideals expressed in current pedagogical literature or, in fact, how much the actual ideals of educators or of society as a whole are expressed in such literature, is a question upon which these tables furnish primary evidence.

Other tables follow which contain a further analysis of the content of the representative subjects into topics. These were tabulated for several purposes: (1) To see in what grades various topics tend to be taught; (2) To discover if the much-debated subject of correlation is really a fact of school practice; (3) To suggest methods of enrichment of the impoverished curriculum or of the relief of the overcrowded curriculum; (4) To inquire if there may not be an improvement in the arrangement of the topics within certain staple subjects of elementary instruction.

Attention is called to the tables showing the historical development of the curricula of five cities of the United States and of the curriculum of the Berlin schools. These tables were correlated in order to detect the tendencies in the course of study. It is worth while to know if we are in reality getting away from the formal and abstract; if we are succeeding in incorporating into the curriculum of the people's school those knowledge studies which may fit more nearly into the needs of society and of child experience than the abstract studies. This struggle between what are popularly known as the theoretical and the practical studies is one of the ever-present problems in American education.

A distinction must be made between the use of the terms "conclusion" and "implication" throughout this work.

Doubtless few absolute conclusions would be warranted by this study. There are many implications, however, to which are to be attached merely the significance of suggestions. The ever-changing condition of society calls for a dynamic and variable curriculum. So that while valuable approximations can and should be made, positive and final conclusions should be avoided. Even if society were static, and if invariability were desirable in the curriculum, it would be exceedingly difficult to make more than suggestive statements regarding conclusions reached in a comparative study of the elementary curricula of the United States, England, Germany and France. There are two reasons for this. First, the task of securing a sufficiently large number of facts upon any one principle would be a work too great for one person; and second, the elimination of so many contingencies would be necessary before a common denominator could be discovered which would furnish a basis for comparisons such as would warrant absolute conclusions. One of these contingencies should be mentioned at this point, viz., the different aims of education in the four countries. If, for instance, Germany aims at the industrial citizen as the product of the Volksschule and the man of culture as the product of the Progymnasium, it is likely that this aim will direct the construction of a curriculum different from that found in the United States, where we seek to give both training for life and training for college in the same elementary school. This and similar exceptions must have their weight in deciding what should be considered as a final conclusion and what as a valuable suggestion.

Yet, after all is said, it remains true that the contingencies are secondary while the actual facts of the curriculum constitute our safer criterion of judgment. The aims of education in the public elementary schools of the four countries do not differ so radically as to dictate a totally different curriculum for each. It is to be feared that our educational theorists have

sometimes excused themselves from making a comparative study of these different curricula by an exaggeration of the supposed disparity of aim and the consequent improbability of gaining suggestions of worth. The tables on the following pages show such a slight difference of curricula in the elementary schools of the several countries, that it makes one suspect either that the aim of education does not determine what shall be studied, or that the aims of the several countries do not differ as much as has been supposed.

Perhaps the latter is the more correct supposition. It is pointed out elsewhere that approximately ninety-five per cent of the school population in the several countries attend only the elementary school, and that the problems of life toward the solution of which the elementary curriculum is directed are simple ones and largely similar in the four countries discussed. This majority of the population who do not attend college should, and probably do, exercise the controlling influence in the selection of the elementary curriculum. Possibly, however, the theorists are to be found in the minority group, and hence our belief in the ultra-importance of the aim of education rather than of the needs of society.

This treatise is largely suggestive, but such a comparative study of facts as is here attempted is necessary to a real contribution to the subject of relative worths in the elementary curriculum. These are not "paper" curricula, but actual courses of study made out for human beings in environments much like our own. Such courses will always furnish primary source material for any investigation which attempts to arrive at either real or ideal conditions in the curriculum of the public elementary schools.

It is unnecessary to say that this study possesses many defects. The immensity of the field to be covered and the vastness of the material to be organized have forced other considerations into the background. Frequently amplifications

which seemed absolutely essential had to be abandoned; the requirements of acceptable English discourse, in some instances, may have been violated for the sake of brevity. Sometimes, too, scientific method had to be abbreviated, and generalizations made upon rather brief inductions. But it is hoped that other students who have been hampered by similar limitations will be able to make generous allowance for such faults.

CHAPTER I.

THE CURRICULUM OF PUBLIC ELEMENTARY SCHOOLS IN CITIES OF THE UNITED STATES.

The general knowledge of the average American citizen regarding the public elementary school is such as to remove the necessity of entering into an exhaustive description of its operations. The facts regarding the American elementary curriculum are given in this chapter in order to show the content and relative importance of subjects as exemplified by the practice of American educators. The prominent characteristics brought out here will afford a basis of comparison for the study of the curricula in other countries. Much of the comparative and descriptive discourse necessary in later chapters, will therefore be omitted here. At present our effort will be to present in brief form those facts and tendencies of the elementary curriculum not generally known.

1. The Subjects of Instruction by Grades in Fifty Cities of the United States.

The first study presented of the curricula of the public elementary schools of the United States was made from the syllabi of the elementary schools of the following fifty cities: Boston, New York, Kansas City, Kan., San Francisco, Columbus, O., Cleveland, O., Lowell, Mass., Jersey City, Columbus, Ga., New Orleans, Chicago, Knoxville, Tenn., Auburn, N. Y., Buffalo, Newark, N. J., Providence, R. I., Louisville, Ky., Indianapolis, Portland, Me., St. Louis, Allegheny, Penn., Joliet, Ill., Springfield, Ill., Spokane, Rochester, St. Paul, Minn., Minneapolis, Chester, O., Toledo, O., Cincinnati, Syracuse,

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Evansville, N. Y., Gloversville, N. Y., Watertown, N. Y., Johnstown, N. Y., Detroit, Poughkeepsie, N. Y., Harrisburg, Atlantic City, Erie, Penn., Hartford, Wilmington, Stockton, Cal., Denver, Aurora, Ill., Wilkesbarre, Lewiston, Me., Philadelphia, Springfield, Mass., Johnstown, Penn.

These cities contain a large percentage of the population of the United States, and therefore Table I., which is a composite table of the subjects of instruction in these cities, might well be called the program of studies by grades of the public elementary schools of America. The purpose of this table is to show the subject matter, and the distribution of that subject matter by grades, and to give some hint as to the importance attached to the subjects over the country at large. The numbers in the columns will in a measure indicate all three of these facts. These numbers represent the number of cities in which a given subject is taught within the particular grade under which the number is scored. As there are fifty cities included in the study, it is evident that a subject receiving a score of fifty is taught in all the city schools in that grade in which the score is placed. If there is a tendency to teach a certain subject in or near a certain grade, then the table should show it by presenting a larger score in that grade and probably also in the two grades adjoining it. If a certain subject is regarded as more important than a certain other subject, the table should show this also, by presenting a larger total score if the columns are added horizontally. However, if a subject were regarded as especially teachable in one or two particular grades only, a high score in those particular grades should be the standard of measurement of its importance.

This composite table is an attempt to ascertain by summary the course of study which in bureaucratic governments is prescribed by the central authority. Such courses of study are seen in Tables LXI. and XLIV., for France and Germany

PUBLIC ELEMENTARY SCHOOL CURRICULA. 21

TABLE I.—Showing the Grades and the Number of Cities of the United States (of the Fifty Cities selected) in which the Various Subjects are taught.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. |
|-----------------------|----|-----|------|-----|----|-----|------|-------|-----|
| 1 Opening Exercises | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 2 |
| 2 Morals | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 3 Reading | 50 | 50 | 50 | 50 | 50 | 48 | 48 | 4 | |
| 4 Writing | 40 | 43 | 42 | 43 | 43 | 42 | 35 | 34 | 4 |
| 5 Spelling | 38 | 41 | 42 | 42 | 43 | 42 | 44 | 40 | 5 |
| 6 Grammar | | | 7 | 10 | 20 | 32 | 41 | 41 | 10 |
| 7 Language | | | | | | | | | |
| 8 Composition | 46 | 47 | 48 | 49 | 50 | 50 | 50 | 48 | 8 |
| 9 Arithmetic | 48 | 50 | 50 | 50 | 50 | 50 | 50 | 44 | 8 |
| 10 Algebra | | | | | | | 1 | 4 | 3 |
| 11 Geography | 7 | 9 | 21 | 48 | 44 | 43 | 42 | 24 | 8 |
| 12 History | 10 | 11 | 12 | 21 | 25 | 31 | 41 | 46 | 10 |
| 13 Civics | 4 | 4 | 8 | 8 | 8 | 7 | 8 | 8 | 8 |
| 14 Elementary Science | | | | | | | | | |
| 15 Nature Study | 32 | 34 | 32 | 30 | 27 | 22 | 24 | 22 | 4 |
| 16 Physiology | 34 | 32 | 34 | 34 | 35 | 36 | 33 | 30 | 3 |
| 17 Physical Training | 25 | 22 | 23 | 24 | 24 | 23 | 23 | 23 | 3 |
| 18 Drawing | 44 | 43 | 45 | 44 | 45 | 49 | 47 | 43 | 7 |
| 19 Music | 44 | 47 | 43 | 42 | 43 | 41 | 42 | 40 | 5 |
| 20 Manual Training | 6 | 6 | 8 | 10 | 11 | 11 | 16 | 18 | 3 |
| 21 Sewing | | | 1 | 6 | 10 | 11 | 8 | 6 | |
| 22 Cooking | | | | | 1 | 2 | 4 | 6 | 1 |
| 23 Bookkeeping | | | | | | | 1 | 2 | 2 |
| 24 Stenography | | | | | | | | 1 | |
| 25 French | | | | | | | | 1 | |
| 26 German | 4 | 5 | 6 | 6 | 7 | 7 | 7 | 7 | |
| 27 Latin | | | | | 1 | 1 | 1 | 2 | |

respectively. In those countries it will be seen that the Minister of Education on behalf of the State prescribes a course of study.

If our schools were operated in the same way, and the influences of the different sections could be embodied in a national course of study by the United States Commissioner of Education on behalf of the federal government, a course of study somewhat like Table I. would constitute the average or pattern from which others could be constructed. But there would be much greater unity than is to be found in Table I., if it were a table prescribed by a central group of experts employed by the government. Generally speaking, either all the schools would teach a certain subject in a certain grade, or none of them would. For instance, the same reason would then re-

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quire fifty cities to teach arithmetic in the first grade that requires forty-six, a principle which does not seem to operate in America at present. Unless the authorities of these four cities could show valid reasons for omitting the teaching of the subject in the grade prescribed, their whim would be overruled for the welfare of the children.

The table shows that today, even after all our talk about the new education, the "three R's" are in the ascendency.

Literature is invariably included in the topic language. It is also the subject matter of the topic reading in nearly all the upper grades. The old reader for the upper grades has not survived. In its place is to be found in the upper primary grades a splendidly illustrated book of selections from the best literature, while literature proper is the reading text for the upper grammar grades.

A very large percentage of these school programs contain a topic, memorizing or declamation, which has been omitted from the present summary. Gems of literature seem to form a staple for memory work under the above topic. One is impressed with the enormous amount of memorizing provided for in the fifty programs examined.

Most of the work done under the compound topic, elementary science and nature study, is what is termed nature study rather than what is known strictly as science.

Nature study, physiology, drawing and music have all established their right to a place in each grade of the elementary school. Even geography, history and manual training have not won so firm a position in all the grades as have the four former studies. In fact manual training, even when sewing, cooking and handwork are added to it, is not taught in so many of the fifty cities as nature study.

It seems to be settled that a foreign language, ancient or modern, is not wanted in the elementary school. This is somewhat remarkable after the vigorous agitation upon the sub-

ject by college and secondary school men during the past fifteen years. Even the Committee of Fifteen, with the advantage of its membership of national educators, seems to have had no effect.

It can be said of but very few subjects of instruction that they are peculiarly the property of any certain grade. Rather, it seems to be the practice to follow the French plan of teaching in every grade whatever is taught in any grade. History and manual training are perhaps more definitely confined to the upper grades than any other subjects. This is particularly true when we eliminate from our consideration as history, the historical stories which constitute the subject matter of history in the primary grades, and from our consideration as manual training, the simple handwork of the children in the primary grades.

The discussion of correlation we prefer to defer to another section. Yet it is interesting to notice here that correlation between history and geography is practically impossible in very many American cities, if these fifty cities are in any degree illustrative. In a large percentage of the schools these two subjects are not taught in the same grade, except for the seventh grade. This statement is emphasized if it be recalled that except for historical stories there is no history in the primary grades. It is true that correlation is largely a matter of method, but one despairs of discovering how a method of correlation can be economically applied when the two subjects are taught in different grades.

History and civics, as such, do not occur in the lower grades. The kindred topics which might legitimately be classed under those titles are historical stories. In fact, below the fifth grade there seems to exist much confusion in the teaching of history. It is found under the various captions, history and civics, history and literature, historical narratives, historical stories, myths and fables, oral history, *et cetera, ad infinitum*.

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Uniformity of terminology does not always indicate uniformity of content, but certainly one is suspicious in reference to the uniformity of content when the terminology is so varied.

Two tendencies are shown in Table I., which are much before the public at present. One of these tendencies is being vigorously discussed throughout the country, but it is only beginning to exercise an influence on the curriculum; the other seems already to have passed the point where ejections ever occur. The two subjects in question are moral teaching and physical culture. The teaching of morals is receiving a definite assignment in a few of the school systems, both under the topic, moral culture, and in opening exercises. It has begun its definite struggle for a place in our public schools. Some states require by law that the subject of moral training be taught in every school. This is true of Massachusetts. It seems more firmly settled in the public mind, however, that the school shall provide for the child a physical training to parallel his mental training. The score for physical culture is much larger than that for the teaching of morals. Evidently the time has already come when a school to be called progressive must make provision of some sort for physical culture.

2. Time Allotments in the Curricula of Ten Cities of the United States.

The value attached to a subject of instruction, so far as it contributes to the ends of education, and so far as it is related in value to other subjects, is measured by the recitation time devoted to it. In order to show the value attached to the respective studies, a type study has been made of the time allotments to the various subjects of instruction in the elementary schools of ten American cities, viz., New York, Boston, Chicago, Cleveland, O., San Francisco, Columbus, Ga., Louisville, Jersey City, New Orleans, and Kansas City, Kan.

PUBLIC ELEMENTARY SCHOOL CURRICULA. 25

The ten double tables (II.-XI.), taken from syllabi of instruction in the public elementary schools of these cities, show the number of minutes per week and the percentage of time per week assigned to each subject in each grade. They also show the percentage of the recitation time given to each subject in the entire eight year course, which is perhaps the best standard of measure of relative importance.

The standards employed in selecting these ten cities were (1) their geographical distribution over the country at large, and (2) their value as types. Preference was given to larger cities whose schools were typical of the section of country in which they are located, but certain smaller cities were included in order to present both aspects of the city course of study. In this way it is hoped that there has been secured, in the two general average tables (XII. and XIII.) which immediately follow the ten city tables, an average time allotment, representing neither the ultra-radical nor the over-conservative, but rather the present practice of America as a whole in the public elementary schools. It is believed that these percentages represent the best thought in our country upon the relative values of the different subjects.

It has been thought best *not* to group the different subjects of instruction under a few headings, as has been the unbroken custom of other writers upon this subject in America. Such a grouping destroys the value of the table. No superintendent or supervisor is called upon to make out a curriculum of a *group* of studies, but a curriculum of individual studies. He needs to know the relative time allotted to each study, and not to a certain group.

The material was compiled either from courses of study furnished by different superintendents, or from tables worked out by them and sent to me. The subjects are given without omissions, just as they were given to me, but are arranged in uniform order.

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TABLE II.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of New York City.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|---|------|------|------|------|------|------|------|-------|------|
| 1 Opening Exercises | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 5.77 |
| 2 Writing | 100 | 125 | 125 | 75 | 75 | 75 | | | 5.53 |
| 6 Language ¹ | 450 | 510 | 450 | 375 | 375 | 375 | 380 | 320 | 30.9 |
| 8 Arithmetic ² | 120 | 150 | 150 | 150 | 150 | 200 | 200 | 180 | 12 |
| 9 Geography | | | | 135 | 120 | 120 | 80 | | 4.38 |
| 10 History ³ | | | | | 90 | 120 | 120 | 120 | 4.33 |
| 13 Elementary Science | | | | | | | 80 | 80 | 1.54 |
| 14 Nature Study | 90 | 90 | 90 | 90 | 75 | | | | 4.19 |
| 15 Physiology, 16 Physical Training, Organized Games, Play | 200 | 165 | 165 | 165 | 90 | 90 | 90 | 90 | 10 |
| 17 Drawing and Con- structive Work | 160 | 160 | 160 | 120 | 120 | 120 | 80 | 80 | 9.62 |
| 18 Music | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 4.62 |
| 19 Manual Training, Cooking | | | | | | | 80 | 80 | 1.94 |
| 20 Sewing and Con- structive Work | 60 | 60 | 60 | 60 | 60 | 60 | | | 3.47 |
| 23 German, French, Stenography, Latin | | | | | | | | 200 | 1.93 |
| Total Recitations | 1315 | 1395 | 1335 | 1305 | 1290 | 1295 | 1225 | 1265 | |
| Total Assignments | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|------------------------------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 5.7 | 5.2 | 5.6 | 5.7 | 5.8 | 5.8 | 6.2 | 6 | |
| 2 Writing | 7.6 | 8.9 | 9.3 | 5.7 | 5.8 | 5.8 | | | |
| 6 Language | 34.2 | 36.5 | 33.7 | 28.5 | 29.1 | 29 | 27.5 | 25.4 | |
| 8 Arithmetic | 9.1 | 10.7 | 11.2 | 8 | 11.7 | 15.5 | 16.4 | 12.7 | |
| 9 Geography | | | | 10.3 | 9.3 | 6.6 | | | |
| 10 History | | | | | 6.9 | 9.3 | 9.9 | 9.9 | |
| 13 Elementary Science | | | | | | | 6.6 | 6.4 | |
| 14 Nature Study | 6.8 | 6.4 | 6.7 | 6.8 | 5.8 | | | | |
| 15 & 16 Physical Training | 15.2 | 11.8 | 12.3 | 12.5 | 6.9 | 6.9 | 7.4 | 7.2 | |
| 17 Drawing, etc. | 12.1 | 11.4 | 11.9 | 9.1 | 9.3 | 9.3 | 6.6 | 6.4 | |
| 18 Music | 4.5 | 4.3 | 4.5 | 4.5 | 4.7 | 4.7 | 5 | 4.8 | |
| 19 Manual Training | | | | | | | 6.6 | 6.4 | |
| 20 Sewing, etc. | 4.5 | 4.3 | 4.5 | 4.5 | 4.7 | 4.7 | | | |
| 23 German, etc. | | | | | | | | 15.9 | |

¹Includes language lessons, grammar, composition, reading, spelling, memorizing.

²Includes civics in Grades VI, VII and VIII.

³Arithmetic in all grades, with a little algebra in Grades VII and VIII.

*The term "total time" as used throughout these pages refers to all of the recitation time assigned either in the entire school or an entire grade.

PUBLIC ELEMENTARY SCHOOL CURRICULA. 27

TABLE III.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Boston, Mass.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Pct. |
|------------------------------------|------|------|------|------|------|------|------|-------|------|------|
| 1 Opening Exercises | 60 | 60 | 60 | 30 | 30 | 30 | 30 | 30 | 30 | 2.9 |
| 2 Reading | 600 | 500 | 500 | 240 | 240 | 240 | 210 | 180 | 180 | 23.3 |
| 3 Writing | | | | | | | | | | |
| 4 Spelling | 120 | 105 | 80 | | | | | | | 2.4 |
| 6 Language | 200 | 200 | 200 | 300 | 300 | 270 | 240 | 240 | 255 | 18 |
| 8 Arithmetic | 150 | 210 | 210 | 270 | 270 | 270 | 210 | 210 | 210 | 16.2 |
| 9 Geography | | | | 120 | 120 | 150 | 150 | 150 | ? | 5.5 |
| 10 History ¹ | | | | | | | 120 | 150 | 180 | 3.63 |
| 13 Elementary Science ² | | | | 90 | 90 | 90 | 90 | 90 | 120 | 4.5 |
| 16 Physical Training | 60 | 90 | 90 | 80 | 80 | 80 | 80 | 80 | 80 | 6 |
| 17 Drawing | 100 | 150 | 150 | 90 | 90 | 90 | 90 | 90 | 90 | 7.1 |
| 18 Music | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 4.3 |
| 19 Manual Training | | | | 120 | 120 | 120 | 120 | 120 | 120 | 5.8 |
| 21 Bookkeeping | | | | | | | | | 75 | .61 |
| Play | 150 | 150 | 150 | 100 | 100 | 100 | 100 | 100 | 100 | |
| Total Recitations | 1350 | 1375 | 1350 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | |
| Total Assignments | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | |

Percentage of Recitation Time devoted to Each Grade per Week.

| | | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 4.5 | 4.5 | 4.5 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | |
| 2 Reading & Literature | 4.4 | 37.1 | 37.1 | 17.1 | 17.1 | 17.1 | 15.1 | 12.9 | 12.9 | |
| 4 Spelling | 8.9 | 7.8 | 6 | | | | | | | |
| 6 Language | 14.8 | 14.8 | 14.8 | 21.3 | 21.3 | 19.3 | 17.1 | 17.1 | 18.2 | |
| 8 Arithmetic | 11.1 | 15.6 | 15.6 | 19.3 | 19.3 | 19.3 | 15.1 | 15.1 | 15.1 | |
| 9 Geography | | | | 8.5 | 8.5 | 10.8 | 10.8 | 10.8 | ? | |
| 10 History | | | | | | | 8.5 | 8.5 | 12.9 | |
| 13 Elementary Science | | | | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 8.5 | |
| 16 Physical Training | 4.5 | 6.7 | 6.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | |
| 17 Drawing | 7.4 | 11.1 | 11.1 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | |
| 18 Music | 4.5 | 4.5 | 4.5 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | |
| 19 Manual Training | | | | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | |
| 21 Bookkeeping | | | | | | | | | 5.3 | |
| Play | 11.1 | 11.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | 7.1 | |

¹Includes civil government in Grade IX.

²Includes physiology.

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TABLE IV.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Chicago, Ill.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|------------------------------|------|------|------|------|------|------|------|-------|------|
| 1 Opening Exercises | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 1.66 |
| 2 Reading & Literature | 675 | 600 | 500 | 250 | 250 | | | | 18.8 |
| 3 Writing | 75 | 75 | 100 | 100 | 60 | 60 | 60 | 60 | 4.88 |
| 4 Spelling | | 50 | 50 | 60 | 60 | 60 | 60 | 60 | 3.31 |
| 5 Grammar | | | | | | 120 | 160 | 180 | 3.72 |
| 6 Language | 150 | 115 | 100 | 65 | 65 | 145 | 175 | 175 | 8.19 |
| 8 Arithmetic | 225 | 225 | 300 | 300 | 300 | 300 | 300 | 300 | 18.6 |
| 9 Geography | | | | 200 | 250 | 200 | 90 | | 6.12 |
| 10 History ¹ | | | | 60 | 60 | 60 | 200 | 200 | 4.79 |
| 14 Nature Study ² | 100 | 100 | 100 | 100 | 90 | 90 | 90 | 90 | 6.28 |
| 15 Physical Training | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 3.31 |
| 17 Drawing | | 60 | 75 | 90 | 90 | 90 | 90 | 90 | 4.84 |
| 18 Music | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 4.96 |
| 19 Manual Training | | | | | | | 90 | 90 | 1.49 |
| 23 German or Latin | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | |
| 23 German or Latin | | | | | 300 | 300 | 300 | 300 | 9.92 |
| Total Recitations | 1375 | 1375 | 1375 | 1375 | 1675 | 1575 | 1765 | 1675 | |
| Total Assignments | 1500 | 1500 | 1500 | 1500 | 1800 | 1700 | 1890 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 1.8 | 1.8 | 1.8 | 1.8 | 1.5 | 1.6 | 1.4 | 1.5 | |
| 2 Reading & Literature | 49.3 | 43.8 | 36.5 | 18.3 | 14.9 | | | | |
| 3 Writing | 5.5 | 5.5 | 7.3 | 7.3 | 3.6 | 3.9 | 3.4 | 3.6 | |
| 4 Spelling | | 3.7 | 3.7 | 4.4 | 3.6 | 3.9 | 3.4 | 3.6 | |
| 5 Grammar | | | | | | 7.7 | 9.1 | 9.6 | |
| 6 Language | 10.9 | 8.4 | 7.3 | 4.8 | 3.9 | 9.2 | 9.9 | 10.5 | |
| 8 Arithmetic | 16.4 | 16.4 | 21.9 | 21.9 | 17.9 | 19.1 | 17.1 | 18 | |
| 9 Geography | | | | 14.8 | 14.9 | 12.8 | 5.1 | | |
| 10 History | | | | 4.4 | 3.6 | 3.9 | 11.4 | 12 | |
| 14 Nature Study | 7.3 | 7.3 | 7.3 | 7.3 | 5.4 | 5.7 | 5.1 | 5.4 | |
| 15 Physical Training | 3.7 | 3.7 | 3.7 | 3.7 | 2.1 | 3.2 | 2.8 | 3 | |
| 17 Drawing | | 4.4 | 5.5 | 5.4 | 5.7 | 5.1 | 5.4 | | |
| 18 Music | 3.5 | 3.5 | 3.5 | 3.5 | 4.5 | 4.8 | 4.3 | 4.5 | |
| 19 Manual Training | | | | | | | 5.1 | 5.4 | |
| 23 German or Latin | | | | | 17.9 | 19.1 | 17.1 | 18 | |
| 23 German or Latin | | | | | 7.5 | 8 | 7.1 | 7.5 | |

¹Algebra added in Grade VIII.

²Includes civics in Grades VII and VIII.

³Includes physiology in Grades VI, VII, and VIII.

PUBLIC ELEMENTARY SCHOOL CURRICULA. 29

TABLE V.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of New Orleans.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|------------------------|------|------|-----------------|------|------|------|------|-------|-------|
| 2 Reading & Literature | 200 | 200 | 225 | 225 | 120 | 120 | 200 | 200 | 13.4 |
| 3 Writing | 90 | 90 | 100 | 60 | 60 | 60 | | | 4.15 |
| 4 Spelling | 75 | 75 | 100 | 100 | 110 | 110 | 90 | 90 | 6.77 |
| 6 Language | 250 | 250 | 288 | 800 | 850 | 850 | 850 | 850 | 22.36 |
| 7 Composition | | | | | 30 | 30 | 30 | 30 | 1 |
| 8 Arithmetic | 285 | 285 | 240 | 240 | 250 | 250 | 250 | 250 | 18.0 |
| 9 Geography | 100 | 100 | 15 ² | 200 | 110 | 110 | 110 | 110 | 8.94 |
| 10 History | 50 | 50 | 50 | 50 | 140 | 140 | 140 | 140 | 6.77 |
| 14 Nature Study | 60 | 60 | 80 | 60 | 60 | 60 | 60 | 60 | 4.5 |
| 15 Physiology | 15 | 15 | 20 | 20 | 30 | 30 | 30 | 30 | 1.72 |
| 16 Physical Training | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 3.61 |
| 17 Drawing | 60 | 60 | 60 | 60 | 55 | 55 | 55 | 55 | 4.15 |
| 18 Music | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 4.33 |
| Total Recitations | 1275 | 1275 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|--|
| 2 Reading & Literature | 15.6 | 15.6 | 15.8 | 15.8 | 8.4 | 8.4 | 14 | 14 | |
| 3 Writing | 7 | 7 | 7 | 4.2 | 4.2 | 4.2 | | | |
| 4 Spelling | 5.8 | 5.8 | 7 | 7 | 7.7 | 7.7 | 6.3 | 6.3 | |
| 6 Language | 19.5 | 19.5 | 20.1 | 21 | 24.5 | 24.5 | 24.5 | 24.5 | |
| 7 Composition | | | | | 2.1 | 2.1 | 2.1 | 2.1 | |
| 8 Arithmetic | 20.6 | 20.6 | 16.8 | 16.8 | 17.5 | 17.5 | 17.5 | 17.5 | |
| 9 Geography | 7.8 | 7.8 | 10.6 | 14 | 7.7 | 7.7 | 7.7 | 7.7 | |
| 10 History | 3.9 | 3.9 | 3.5 | 3.5 | 9.8 | 9.8 | 9.8 | 9.8 | |
| 14 Nature Study | 4.6 | 4.6 | 5.6 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | |
| 15 Physiology | 1.1 | 1.1 | 1.4 | 1.4 | 2.1 | 2.1 | 2.1 | 2.1 | |
| 16 Physical Training | 3.9 | 3.9 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | |
| 17 Drawing | 4.6 | 4.6 | 4.2 | 4.2 | 3.8 | 3.8 | 3.8 | 3.8 | |
| 18 Music | 4.6 | 4.6 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | |

²Algebra added in Grade VIII.

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TABLE VII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Kansas City, Kan.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|------------------------|-----|-----|------|-----|-----|-----|------|-------|------|
| 2 Reading & Literature | 150 | 150 | 100 | 125 | 125 | 125 | 125 | 120 | 14.5 |
| 3 Writing | 125 | 100 | 100 | 120 | 120 | 120 | | | 9.68 |
| 4 Spelling | 75 | 150 | 100 | 100 | 100 | 100 | 75 | 50 | 10.7 |
| 6 Language | 70 | 100 | 105 | 100 | 100 | 100 | 125 | 150 | 11.2 |
| 8 Arithmetic | 150 | 75 | 200 | 125 | 125 | 125 | 125 | 150 | 15.1 |
| 9 Geography | 10 | 20 | 20 | 100 | 100 | 100 | 125 | 60 | 7.54 |
| 10 History | | | | 30 | 30 | 30 | 100 | 120 | 4.38 |
| 11 Civil Government | | | | | | 30 | 25 | 30 | |
| 14 Nature Study | 20 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 3.11 |
| 16 Physical Training | 10 | | | | | | | | |
| 17 Drawing | 100 | 100 | 100 | 120 | 120 | 90 | 90 | 90 | 11.5 |
| 18 Music | 100 | 100 | 100 | 100 | 100 | 100 | 75 | 75 | 10.6 |
| Total Recitations | 810 | 820 | 850 | 950 | 950 | 950 | 895 | 875 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|------------------------|------|------|------|------|------|------|------|------|--|
| 2 Reading & Literature | 18.5 | 18.4 | 11.8 | 13.2 | 13.2 | 13.2 | 14 | 13.8 | |
| 3 Writing | 15.4 | 12.2 | 11.6 | 12.6 | 12.6 | 12.6 | | | |
| 4 Spelling | 9.2 | 18.4 | 11.8 | 10.5 | 10.5 | 10.5 | 8.4 | 5.7 | |
| 6 Language | 8.5 | 12.1 | 12.5 | 10.5 | 10.5 | 10.5 | 14 | 17.2 | |
| 8 Arithmetic | 18.5 | 9.1 | 23.6 | 13.2 | 13.2 | 13.2 | 14 | 17 | |
| 9 Geography | 1.2 | 2.4 | 2.4 | 10.2 | 10.5 | 13.2 | 14 | 6.8 | |
| 10 History | | | | 3.1 | 3.1 | 3.1 | 11.2 | 13.8 | |
| 11 Civil Government | | | | | | 3.1 | 2.8 | 3.4 | |
| 14 Nature Study | 2.4 | 3 | 2.9 | 3.1 | 3.1 | 3.3 | 3.4 | 3.4 | |
| 16 Physical Training | 1.2 | | | | | | | | |
| 17 Drawing | 12.3 | 12.2 | 11 | 10.5 | 10.5 | 13.2 | 8.4 | 8.6 | |
| 18 Music | 12.3 | 12.2 | 11.8 | 10.5 | 10.5 | 13.2 | 8.4 | 8.6 | |

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TABLE VIII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Jersey City.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|--------------------------|------|------|------|------|------|------|------|-------|------|
| 1 Opening Exercises | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 3.74 |
| 2 Reading | 560 | 560 | 450 | 405 | 370 | 310 | 280 | 270 | 30 |
| 3 Writing | 100 | 100 | 100 | 100 | 90 | 90 | 70 | 85 | 6.88 |
| 5 & 6 Language & Grammar | 125 | 125 | 125 | 160 | 180 | 190 | 230 | 260 | 10.3 |
| 8 Arithmetic | 225 | 245 | 270 | 280 | 270 | 270 | 270 | 270 | 19.5 |
| 9 Geography | | | 80 | 100 | 125 | 145 | 145 | 130 | 6.78 |
| 10 History | | | | | 60 | 90 | 100 | 137 | 3.62 |
| 14 Nature Study | 30 | 30 | 40 | 40 | 45 | 45 | 45 | 52 | 3 |
| 15 Physiology | 20 | 20 | 30 | 30 | 30 | 30 | 30 | 30 | 2 |
| 16 Physical Training | 155 | 135 | 120 | 100 | 50 | 50 | 50 | 50 | |
| 17 Drawing | 80 | 80 | 80 | 80 | 90 | 90 | 90 | 90 | 6.38 |
| 18 Music | 60 | 60 | 60 | 60 | 45 | 45 | 45 | 45 | 3.93 |
| Morals & Manners | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 1.5 |
| Total Recitations | 1270 | 1290 | 1305 | 1325 | 1375 | 1375 | 1375 | 1439 | |
| Total Assignments | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1425 | 1489 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|----------------------|------|------|-----|------|------|------|------|------|--|
| 1 Opening Exercises | 4 | 3.9 | 3.8 | 3.8 | 3.7 | 3.7 | 3.7 | 3.5 | |
| 2 Reading | 44.1 | 43.4 | 34 | 30 | 27 | 22.7 | 20.5 | 18.9 | |
| 3 Writing | 7.9 | 7.8 | 7.7 | 7.6 | 6.6 | 6.6 | 6.6 | 6.3 | |
| 5 Grammar & Language | 9.9 | 9.7 | 9.6 | 12 | 13.2 | 13.9 | 16.8 | 18.2 | |
| 8 Arithmetic | 17.7 | 19 | 20 | 21.3 | 19.7 | 19.7 | 19.7 | 18.9 | |
| 9 Geography | | | 6.2 | 7.6 | 9.1 | 10.6 | 10.6 | 9.1 | |
| 10 History | | | | | 4.4 | 6.6 | 7.3 | 9.6 | |
| 14 Nature Study | 2.4 | 2.4 | 3 | 3 | 3.3 | 3.3 | 3.3 | 3.7 | |
| 15 Physiology | 1.6 | 1.6 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.1 | |
| 16 Physical Training | 11 | 9.5 | 8.5 | 7.1 | 5 | 5 | 5 | 3.4 | |
| 17 Drawing | 6.3 | 6.3 | 6.2 | 6.1 | 6.6 | 6.6 | 6.6 | 6.3 | |
| 18 Music | 4.8 | 4.7 | 4.6 | 4.6 | 3.3 | 3.3 | 3.3 | 3.2 | |
| Morals & Manners | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.4 | |

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TABLE IX.—Minutes of Recitation Time per week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Columbus, Georgia.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|---------------------|------|------|------|------|------|------|------|-------|------|
| 1 Opening Exercises | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 5.18 |
| 2 Reading | 500 | 300 | 300 | 240 | 240 | 200 | 90 | 60 | 16.7 |
| 3 Writing | 75 | 75 | 100 | 100 | 60 | 60 | 40 | 30 | 4.11 |
| 4 Spelling | 100 | 150 | 140 | 120 | 120 | 100 | 60 | 30 | 6.38 |
| 6 Language | 200 | 220 | 220 | 250 | 300 | 300 | 300 | 300 | 18.1 |
| 8 Arithmetic | 225 | 225 | 275 | 300 | 300 | 325 | 300 | 205 | 18.6 |
| Algebra | | | | | | | | 220 | 1.9 |
| 9 Geography | | 80 | 200 | 225 | 250 | 285 | 200 | | 10.7 |
| 10 History | | | | | | | 250 | 180 | 8.71 |
| 17 Drawing | 60 | 60 | 60 | 60 | 75 | 75 | 65 | 40 | 4.27 |
| 18 Music | 70 | 70 | 70 | 70 | 70 | 70 | 60 | 60 | 4.34 |
| 19 Manual Training | 45 | 45 | 80 | 60 | 60 | 60 | 90 | 90 | 4.47 |
| 24 Latin | | | | | | | | 280 | 2. |
| Play | 200 | 200 | 200 | 200 | 150 | 150 | 150 | 150 | |
| Total Assignments | 1350 | 1350 | 1500 | 1500 | 1550 | 1550 | 1520 | 1520 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|---------------------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 5.6 | 5.6 | 5. | 5. | 4.9 | 4.9 | 5. | 5. | |
| 2 Reading | 37.1 | 22.2 | 20. | 16.1 | 15.3 | 13. | 5.9 | 4. | |
| 3 Writing | 5.6 | 5.6 | 6.6 | 6.67 | 3.9 | 3.9 | 2.6 | 2.1 | |
| 4 Spelling | 7.4 | 11.1 | 9.3 | 8.1 | 7.8 | 6.5 | 3.9 | 2.1 | |
| 6 Language | 14.8 | 16.3 | 14.6 | 17.1 | 19.4 | 19.4 | 19.8 | 20. | |
| 8 Arithmetic | 16.7 | 20.4 | 18.2 | 20. | 19.4 | 21. | 19.8 | 13.5 | |
| Algebra | | | | | | | | 4.5 | |
| 9 Geography | | 5.9 | 13.3 | 15.7 | 16.1 | 18.4 | 13.1 | | |
| 10 History | | | | | | 16.4 | 12. | | |
| 17 Drawing | 4.5 | 4.5 | 4. | 4. | 4.9 | 4.9 | 4.3 | 2.8 | |
| 18 Music | 5.2 | 5.2 | 4.7 | 4.7 | 4.5 | 4.5 | 3.9 | 4. | |
| 19 Manual Training | 3.4 | 3.4 | 4. | 4. | 3.9 | 3.9 | 3.9 | 6. | |
| 24 Latin | | | | | | | | 15. | |
| Play | 12.9 | 12.9 | 11.7 | 11.3 | 7.83 | 8.82 | 8.84 | 9. | |

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TABLE X.—Minutes of Recitation Time per week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Louisville, Ky.

[illegible]

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|
| 1 Opening Exercises | 2.7 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 2 Reading and Literature | 52.7 | 37.1 | 31.5 | 24.8 | 17.1 | 11.1 | 11.1 | 11.1 |
| 3 Writing | 3.3 | 7.4 | 7.4 | 8.7 | 5.2 | 5.2 | | |
| 4 Spelling | | 7.4 | 7.4 | 7.4 | 5.8 | 5.8 | 5.8 | 5.8 |
| 5 Grammar | | | | | | | 11.1 | 11.1 |
| 6 Language | 10.8 | 16.3 | 18.5 | 11.1 | | | | |
| 7 Composition | | | | | 11.1 | 11.1 | 10. | 10. |
| 8 Arithmetic | 10.8 | 15.2 | 18.5 | 18.5 | 18.5 | 18.5 | 17.8 | 17.8 |
| 9 Geography | | | | 14.8 | 16.3 | 16.3 | 14.8 | 13.7 |
| 10 History | | | | | | 9.3 | 11.1 | 11.1 |
| 11 Nature Study | | | | | 5.8 | 5.8 | 4.5 | 5.8 |
| 12 Physical Training | 5.3 | 3.7 | 3.7 | 3.7 | | | | |
| 13 Drawing | 7.9 | 5.8 | 5.8 | 5.8 | 6.7 | 6.7 | 6.7 | 6.7 |
| 14 Music | 5.3 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 |
| 15 Play | 10. | 10. | 10. | 10. | 10. | 10. | 10. | 10. |

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TABLE XI.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Cleveland, O.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|--------------------------|------|------|------|------|------|------|------|-------|------|
| 1 Opening Exercises | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 1.76 |
| 2 Reading and Literature | 550 | 530 | 525 | 335 | 195 | 195 | 210 | 210 | 25. |
| 3 Writing | 75 | 105 | 125 | 90 | 70 | 70 | 70 | 70 | 5.43 |
| 4 Spelling | | 125 | 100 | 125 | 75 | 75 | 75 | 45 | 5.8 |
| 5 Language | 125 | 155 | 135 | 125 | 290 | 290 | 250 | 270 | 14.7 |
| 6 Arithmetic | 150 | 155 | 225 | 250 | 270 | 270 | 300 | 300 | 17.2 |
| 9 Geography | | | | 200 | 245 | 245 | | | 8.22 |
| 10 History | | | | | | | 180 | 175 | 3. |
| 13 Elementary Science | | | | | | | 80 | 80 | 1.45 |
| 15 Physiology | 20 | 25 | 25 | 25 | 40 | 40 | 40 | 40 | 2.3 |
| 16 Physical Training | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 40 | 3.52 |
| 17 Drawing | 60 | 80 | 60 | 65 | 70 | 70 | 70 | 85 | 5. |
| 18 Music | 60 | 75 | 60 | 65 | 70 | 70 | 70 | 75 | 4.91 |
| 19 Manual Training | 60 | 80 | 70 | 45 | | | | | 2.3 |
| 21 Bookkeeping | | | | | | | | 50 | .45 |
| Play | 25 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | |
| Total Assignments | 1175 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | 1400 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 2.2 | 1.81 | 1.81 | 1.43 | 1.7 | 1.7 | 1.43 | 1.7 | |
| 2 Reading and Literature | 47.3 | 38.1 | 37.4 | 23.9 | 13.4 | 13.4 | 14.6 | 14.6 | |
| 3 Writing | 6.4 | 7.5 | 8.9 | 6.4 | 4.8 | 4.8 | 5. | | |
| 4 Spelling | | 8.9 | 7.1 | 8.9 | 5.2 | 5.2 | 5.3 | 3.1 | |
| 5 Language | 10.7 | 11.1 | 9.6 | 8.9 | 20 | 20 | 18 | 19.4 | |
| 6 Arithmetic | 12.9 | 11.1 | 16 | 18 | 18.5 | 18.5 | 21.5 | 21.5 | |
| 9 Geography | | | | 14.5 | 16.8 | 16.8 | | | |
| 10 History | | | | | | | 12.1 | 12.6 | |
| 13 Elementary Science | | | | | | | 5.3 | 5.3 | |
| 15 Physiology | 1.7 | 1.8 | 1.8 | 1.8 | 2.8 | 2.8 | 2.8 | 2.8 | |
| 16 Physical Training | 4.3 | 3.5 | 3.6 | 3.6 | 3.4 | 3.4 | 3.6 | 2.8 | |
| 17 Drawing | 5.2 | 5.7 | 4.2 | 4.7 | 4.8 | 4.8 | 5 | 6.1 | |
| 18 Music | 5.2 | 5.3 | 4.2 | 4.7 | 4.8 | 4.8 | 5 | 5.4 | |
| 19 Manual Training | 5.2 | 5.7 | 5 | 3.2 | | | | | |
| 21 Bookkeeping | | | | | | | | 3.5 | |
| Play | 2 | 6.6 | 6.6 | 6.4 | 6.4 | 6.4 | 6.6 | 6.5 | |

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In the tables II.-XI. (pages 26-36), the minutes per week devoted to each subject in each grade are given first. The last column to the right in each table shows the percentage of total time allotted to each subject in the whole of the eight year elementary course. In other words, it shows the relative importance which a subject holds in the curriculum by virtue of the time allotted to it, in comparison with that assigned to other subjects. Just beneath this first table on each page is a second one showing the percentage of time devoted to each subject in each grade. In the former case the total recitation time in the entire elementary school is used as a basis of calculation; in the latter the total recitation time of the respective grade is used. For instance, the 12 per cent of total recitation time for arithmetic, appearing in the last column to the right in the upper half of Table II., was calculated by using the sum of the figures in the horizontal column marked "Arithmetic" as a dividend, and the sum of the horizontal column marked "Total Recitation" as a divisor. The 9.1 per cent of recitation time devoted to arithmetic in the first grade, as it appears in the lower half of Table II., was calculated by using the one hundred and twenty minutes of first grade recitation time assigned to arithmetic in the upper half of the table as a dividend and 1315 minutes of total first grade weekly recitation time as a divisor.

Some of the questions which one naturally asks of such tables, displaying the time allotted to the various subjects of instruction in the elementary school curriculum, are:

Should provision be made for teaching every subject in every grade, such as is commonly made for teaching arithmetic and language in all grades from the first to the eighth?

Should there be a uniform increase or decrease of time from the first grade onward?

Should there be fewer minutes per week of recitation time in the earlier grades, or should the time be somewhat equally

distributed to all grades, and the quantity of intellectual work and handwork vary instead?

Should the average number of minutes per week of recitation time approximate one thousand or one thousand and five hundred?

Is there good reason why arithmetic and grammar should be taught in the earlier grades, while history, literature, geography, etc., should not be taught?

Does the curriculum provide for the æsthetic, the volitional, the emotional, the physical, the moral, as well as the intellectual aspects of the child's mind and experience?

Are there subjects which are not needed in the life of the average citizen, or do such subjects monopolize the recitation time to the exclusion of others that do clearly fit certain social needs of people in general?

Is there provision for the interests of the child?

What is the relative proportion of desk work to physically active work required by the curriculum?

The answers that are being given to these questions in perhaps the majority of American schools are illustrated in the ten preceding tables. The answers that other progressive cities in other parts of the world are giving will be found in later chapters. The development of these answers will constitute the task of this entire study.*

3. *Average Time Allotments and What They Show.*

The two following tables, XII. and XIII., afford a basis for comparing the previous ten tables. This comparison presents certain representative suggestions as to the attempts of

*They are only stated in the outset that the reader may not miss the purpose of the rather exhaustive tabulations which are pursued in the course of this investigation. If any question does not appear to be answered as fully as the reader may desire in the discussion, a casual reference to the tables will doubtless offer the more complete information sought. Frequently facts have not been repeated in the body of the discussion which are more graphically shown in the tabular form.

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American educators to solve some of the problems which have so far been pointed out in these pages.

TABLE XII.—Showing the Average Time in Minutes per Week given to Each Subject in Each Grade in Ten American Cities.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|---------------------------|------|------|------|------|------|------|------|-------|
| 1 Opening Exercises | 43 | 43 | 43 | 40 | 40 | 40 | 40 | 40 |
| 2 Reading and Literature | 443 | 404 | 387 | 373 | 232 | 180 | 142 | 129 |
| 3 Writing | 80 | 78 | 91 | 79 | 62 | 62 | 28 | 22 |
| 4 Spelling | 47 | 90 | 81 | 73 | 67 | 62 | 44 | 33 |
| 5 Grammar | | | | | | | | |
| 6 Language and | | | | | | | | |
| 7 Composition | 130 | 146 | 144 | 158 | 176 | 224 | 254 | 256 |
| 8 Arithmetic | 161 | 195 | 232 | 239 | 241 | 249 | 242 | 231 |
| 9 Geography | 11 | 20 | 53 | 156 | 164 | 150 | 127 | 81 |
| 10 History and | | | | | | | | |
| 11 Civil Government | 5 | 5 | 5 | 17 | 41 | 171 | 152 | 160 |
| 13 Elementary Science and | | | | | | | | |
| 14 Nature Study | 35 | 35 | 84 | 46 | 51 | 44 | 58 | 49 |
| 15 Physiology | 7 | 7 | 8 | 8 | 13 | 13 | 8 | 8 |
| 16 Physical Training | 52 | 49 | 50 | 49 | 42 | 37 | 37 | 37 |
| 17 Drawing | 75 | 85 | 88 | 82 | 86 | 92 | 78 | 77 |
| 18 Music | 67 | 71 | 68 | 68 | 67 | 67 | 64 | 64 |
| 19 Manual Training | 16 | 18 | 19 | 33 | 30 | 30 | 50 | 50 |
| Total Assignments | 1174 | 1250 | 1285 | 1401 | 1313 | 1404 | 1327 | 1245 |

Showing the Average Percentage of Recitation Time given to Each Subject in Each Grade in Ten American Cities.

| | | | | | | | | |
|-----------------------------|------|------|------|------|------|------|------|------|
| 1 Opening Exercises | 3.6 | 3.4 | 3.4 | 3.5 | 2.9 | 2.9 | 2.9 | 2.9 |
| 2 Reading and Literature | 37.3 | 31.3 | 28.7 | 26.6 | 17 | 12.2 | 10.4 | 9.5 |
| 3 Writing | 6.7 | 6.1 | 7.1 | 5.9 | 4.5 | 4.5 | 2 | 1.6 |
| 4 Spelling | 3.9 | 7.1 | 6.3 | 5.5 | 4.9 | 4.6 | 3.2 | 2.4 |
| 5 Grammar | | | | | | | | |
| 6 Language and | | | | | | | | |
| 7 Composition | 10.9 | 10.1 | 10.1 | 10.1 | 10.2 | 16.5 | 18.6 | 18.8 |
| 8 Arithmetic | 13.6 | 15.4 | 18.2 | 18 | 17.8 | 18.3 | 17.7 | 17 |
| 9 Geography | .9 | 1.5 | 4.1 | 11.8 | 12 | 11.1 | 9.3 | 5.9 |
| 10 History, etc. | .4 | .4 | .4 | 1.2 | 8 | 5.2 | 11.1 | 12 |
| 13 Elementary Science, etc. | 2.9 | 2.8 | 2.8 | 3.4 | 3.7 | 3.2 | 4.2 | 3.6 |
| 15 Physiology | .5 | .6 | .6 | .6 | .9 | .9 | .6 | .6 |
| 16 Physical Training | 4.3 | 3.9 | 3.9 | 3.7 | 3 | 2.7 | 2.7 | 2.7 |
| 17 Drawing | 6.3 | 6.9 | 6.8 | 6.1 | 6.2 | 6.7 | 5.7 | 5.6 |
| 18 Music | 5.6 | 5.6 | 5.3 | 5.1 | 4.9 | 4.9 | 4.6 | 4.7 |
| 19 Manual Training | 1.3 | 1.4 | 1.4 | 2.5 | 2.1 | 2.2 | 3.6 | 3.6 |

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TABLE XIII.—Showing the Percentage of Total Time given to Each Study in the Public Elementary Schools of Ten American Cities.

| | Boston. | Chicago. | Cleveland. | Columbus, Ga. | Jersey City. | Kansas City. | Louisville. | New Orleans. | New York. | San Francisco. | Average. |
|---------------------------------|--------------|----------|------------|---------------|--------------|--------------|-------------|--------------|--------------|----------------|----------|
| 1 Opening Exercises | 2.9 | 1.6 | 1.7 | 5.1 | 3.7 | 1 | 1.9 | 1.5 | 5.7 | 4.4 | 3.1 |
| 2 Reading and Literature | 23.3 | 18.8 | 23.6 | 18.9 | 30 | 14.5 | 23.9 | 13.4 | ¹ | 20.2 | 20.7 |
| 3 Writing | ¹ | 4.8 | 5.4 | 4.1 | 6.8 | 9.6 | 4.8 | 4.1 | 5.5 | 5.1 | 4.7 |
| 4 Spelling | 2.4 | 3.3 | 5.6 | 6.3 | ² | 10.7 | 5.7 | 5.1 | 2.9 | 7.2 | 4.7 |
| 5 Grammar | | | | | | | | | | | |
| 6 Language | | | | | | | | | | | |
| 7 Composition | 17.7 | 11.9 | 16.1 | 18.1 | 10.3 | 11.1 | 12.5 | 17.6 | 30.9 | 13.7 | 14.4 |
| 8 Arithmetic | 16.2 | 18.6 | 17.3 | 18.6 | 19.5 | 15.1 | 17.2 | 18.6 | 12 | 15.3 | 17.3 |
| 9 Geography | 5.5 | 6.1 | 6.2 | 10.7 | 6.7 | 7.5 | 9.8 | 8.9 | 4.3 | 6.9 | 7.2 |
| 10 History | | | | | | | | | | | |
| 11 Civil Government | 3.6 | 4.7 | 3 | 3.7 | 3.6 | 6.6 | 4 | 5.7 | 4.3 | 6.6 | 4.8 |
| 12 Elementary Science | | | | | | | | | | | |
| 14 Nature Study | 4.5 | 6.2 | 1.4 | | 3 | 3.1 | 2.7 | 4.5 | 5.6 | 3.9 | 3.4 |
| 15 Physiology | | | 2.3 | | 2 | | .7 | 1.7 | ³ | | .7 |
| 16 Physical Training | 6 | 3.3 | 3.5 | | | | 2.4 | 3.6 | 8 | 4.1 | 4.7 |
| 17 Drawing | 7.1 | 4.8 | 5 | 4.2 | 6.4 | 11.5 | 6.4 | 4.1 | 9.6 | 5 | 6.4 |
| 18 Music | 4.3 | 4.9 | 4.9 | 4.3 | 3.9 | 10.6 | 5.5 | 4.3 | 4.6 | 5.3 | 5.1 |
| 19 Manual Training ⁴ | 5.8 | 1.5 | 2.3 | 4.4 | | | | | 5.4 | 4 | 2.4 |

¹Included with language.

²Included with reading.

³Included with nature study.

⁴Includes cooking and sewing.

In many of the subjects of instruction there is a wide range of variation as to the recitation time assigned. Yet in the ten city schools, as a whole, reading, writing and arithmetic show their traditional supremacy in the school curriculum by monopolizing 43 per cent of the entire time. For if we include in the definition of formal studies, reading, writing, arithmetic, spelling and language, it can be said for these ten elementary schools that the formal studies receive 62 per cent of the assigned time, while the numerous studies known as content studies receive but little more than 30 per cent. All of which suggests that getting a subject introduced into a curriculum, and getting it taught after it has been introduced, are entirely different matters. Evidently the advocates of such studies as nature study, manual training, drawing, music, etc., still have a battle to

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wage in order to secure a fair apportionment of time for their favorites. It is noticed elsewhere that New York City is a remarkable exception in this respect, since it allows about 42 per cent of time to these new studies. Whether this disproportion in the other cities is due to opposition from society and the environment, or to indifference upon the part of the superintendents, it is difficult to say. But it is fair to remark that the content studies are receiving more attention today than ever before in the public elementary schools of America. For, if it be remembered that literature is included in the topic language, and that reading, as it is taught in these latter years, is to a very large degree good *literature*, then the 62 per cent just mentioned should be diminished to nearly 50 per cent, which would mean that there is about an equal allotment of time to formal and content studies, provided literature may be counted with content studies. This conclusion is corroborated in a study made for the Massachusetts Board of Education under the title, "Course of Study in Elementary Schools" (pp. 31 and 32), by Mr. John T. Prince in 1896, although I think his study rather exaggerated the time devoted to content studies at that time, because of the fallacy of selection in the group of cities which he used. His selections were confined too exclusively to cities of Massachusetts.

Of the new studies introduced in recent years, drawing and music are the most popular. Tables I., XII., and XIII. show this. Table I. shows that they are taught in every grade in 75 per cent of the fifty schools; in Tables II.-XIII. they appear to follow a steady time assignment, freed from the irregularity of recitation time common to many other newly introduced subjects as they progress from lower to higher grades. At first it appears a little remarkable that these two, of all the subjects which have struggled for introduction to the elementary course of study in recent years, should receive the larger and more systematic attention. But the tendency

is in perfect harmony with the historical development of all science in general, and of the elementary curriculum in particular. It is an historical fact that we teach those subjects for many years which are less useful, before introducing those that are fundamentally essential. We make scientific study of those activities which are to be classed among the luxuries, before we begin to investigate those which are of every day service. We seem to consider the study which is more intrinsically serviceable to be uneducative and beneath the dignity of the scientist. Men studied music long before they did farming, alchemy before chemistry, and the theory of pedagogy centuries before real school teaching. Even during the last six months, the Board of Education of the New York City schools has been incessantly disciplined by the public press for giving too much time in those schools to what are popularly called "the fads and frills," a term which embraces such subjects as manual training, cooking, sewing, etc. So, while at present true to the process of historical development in the elementary curriculum, let us hope that this particular stage shall not enthrall us so long that those subjects really needed by the child in society shall be postponed unnecessarily long by the introduction of those which might well be delayed.

It is noticeable that while physiology and hygiene receive the least time allotment of all subjects, they are taught in every grade in three-fourths of the fifty schools from which Table I. was made. While physical training, as shown on that table, was taught by slightly fewer cities, yet it receives in these ten courses of study seven times the allotment that physiology and hygiene do, and twice as much as manual training.

In reference to manual training, by comparing this and the preceding tables, it will be seen that manual training can hardly yet be said to have entered the elementary school at all. It is taught in but few of the fifty schools mentioned,

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and receives relatively little time in these ten typical school courses, and that mostly in the two upper grades.

Again, the absence of correlation between history and geography in the lower grades is noticeable. History receives scarcely any recitation time before the sixth grade, while geography in the fourth and fifth grades receives nearly as much time as language, composition and grammar combined. In the sixth, seventh and eighth grades, where history receives its largest proportion of time, geography receives its least, the time assignment for geography decreasing until the eighth grade, where it has barely eighty-one minutes a week.

4. *Analysis of the Various Subjects of Instruction into Topics.*

From a study of the following tables (XIV.-XVIII.), it is evident that in most elementary schools there is a congestion of subject matter in the curriculum. Such an enormous number of unrelated topics is presented to the child that organization into a unified whole is almost impossible by any mind, much less by the untrained mind of the child. It has already been shown that new subjects have been added while old ones have been omitted. Whether we wish it or not, the public has decided that all the subjects of instruction now being taught in the elementary curriculum shall remain. That is not a pedagogical question at present, but a social demand. It is true, the educational innovator introduced the new subjects for what seemed to him sound pedagogical reasons. Now, however, the plain citizen has gone a step farther, and has decided not only to keep the new but to retain all the old studies also. In introducing new subjects the enthusiastic educator said that they were more practical than the old formal studies. To this the citizen assented, for the citizen is nothing if not practical. But the citizen added that since other subjects had done good service for a long time, all

should be retained, in order that the practical and the formally theoretic might each receive attention. Thus the pedagogue has lost on his own proposition, because of the absence of any principle of selection and omission in making up the course of study prescribed by the "new education."

There is, therefore, no hope of relieving the overcrowded curriculum by omitting subjects. Whatever relief is to be had must come from such an organization of topics under these large subjects as will omit the irrelevant. But what is to be the standard of the measurement of relative importance? Upon certain details of this question there will inevitably be disagreement. Because of the existence of different standards and different environmental influences, some will decide for one topic and some for another. But if it is generally agreed that omission of topics is necessary, and that one method of selection and omission is by the organic grouping of many of these detailed topics under a few large ones, relief of the present overcrowding can be accomplished, notwithstanding such difference of opinion.

Yet it does seem that the standard for the selection of subject matter for the curriculum, which has been so vigorously advocated during the past few years, might well be applied to the topics within those subjects. That standard has been based upon our social needs. It has been held that whatever society really needs, as determined by its economic, ethical, literary and spiritual activities, should be taught to the young citizen in the schools, so far as the nature of the child will allow. Why should not this same severe test be applied to the topics in both the old and the newly introduced subjects of the curriculum? A glance at an analysis into the topics of the curriculum of any American city school will show that topics which cannot be said to fulfil the conditions of the foregoing standard are to be found in both the old and the new studies. Better organization of the topics in the various subjects of

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recent introduction is needed; many of them ought to be omitted outright and many others combined. The old studies, such as arithmetic, language, history, geography and spelling, may not so much need the grouping of smaller topics under larger ones, as they need out-and-out omissions, when tested by the standard of social value suggested above. And yet, such is the difference of topics in the schools represented in the ten city schools from which this study was made, especially in reference to history and geography, that but casual study will reveal that some of the old studies need organization quite as much as the new ones. It might be more nearly correct, therefore, to say that all the subjects in the curriculum at present are woefully in need of a more careful selection of the material within them, and a co-ordination of various related topics which at present stand isolated in the syllabi and text-books.

The argument for this re-organization is readily found by analyzing the subjects arithmetic, language, history, geography and nature study, in the following tables of topics. These topics were copied just as given in the various courses of study printed by the superintendents of schools in the ten American cities from which the time allotment tables in the former part of the chapter are taken. Some of the topics overlap, but none are mentioned separately which do not include ideas not expressed in any other one topic in the tables. It is not the function or the purpose of this present treatment to unite or to show a possible grouping of several kindred topics under one large one, but to describe the topics just as they were printed by the superintendents and supervisors for the teacher's guidance, in order to show the need of organization and uniformity, both within individual courses of study and among the systems in general.

These tables (XIV.-XVIII.) also furnish an opportunity for observing the grade distribution of the different topics,

or at least the tendency among the ten cities to teach certain topics in a certain grade. There is, for instance, a practical agreement among them that fractions in arithmetic shall be taught in or near the fifth grade, while percentage ought to receive its closest study near the seventh grade. The frequent repetition of the same topic in several grades is accounted for by the very elementary character of the introductory work in the grades of its first appearance, and by the review work in upper grades where it is scored. The time allotted any topic may be approximated by reference to Table XII., which contains the average time allotted to each subject in each grade of the ten cities from which these topics were taken. These tables, combined with the percentages in Table XII., will also show in a general way the relative importance attached by these ten cities to the topics within the same subject. This is done by correlating the frequency of the occurrence of a topic in a grade (Tables XIV.-XVIII.) and the time allotted the subject in that grade in which most of the cities teach it, as shown by Table XII. For instance, the largest average time allotment to geography occurs in grades IV. and V., as will be seen by reference to Table XII. The topics most taught in those grades are North America and the United States. This ought to give some approximate idea as to the relative importance attached in the study of geography to these two topics.

Again, it might suggest the value attached to a topic by the cities to add the number of total scores which a topic received in all grades. This, of course, would not apply in case a topic were of marked difficulty of comprehension. For instance, upon this standard of values it might be assumed, with a large degree of probability, that in arithmetic (see Table XIV.) the first nine topics are regarded as of more importance to the student than the other twenty.

The figures in the following tables (XIV.-XVIII.) represent

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the number of cities in which the given topic is taught in the given grade. As there are but ten cities included in the scoring, if any one topic receives ten scores in any one grade, it indicates a unanimous agreement as to the proper grade in which that topic should be taught.

ARITHMETIC.—The following explanations and implications with reference to Tables XIV.-XVIII. may assist in their interpretation. It is well known to all who have been acquainted with the teaching of arithmetic that certain topics formerly never omitted from arithmetic, are dropped from the schools today without hesitation.

It is very evident that the theory of education which stands for teaching a small portion of a subject one year, and adding little by little to it during each succeeding year, has some adherents who make out courses of study for certain large American cities. With due regard to what has already been said in reference to the frequent repetition of topics in different grades, it nevertheless appears that poor teaching or lack of capacity in the child must be brought forward to explain why such simple topics as notation, numeration and addition should be taught for five successive years.

LANGUAGE.—When difficult topics, such as inflection, occur in both upper and lower grades in Table XV., it is understood that the work in lower grades is very elementary, in upper grades more technical.

The presence in this outline of numerous topics in a grade, especially above the fourth grade, indicates lack of progress, inasmuch as the topics added in the upper grades are almost entirely taken from grammar. This subject, by common acceptance, should not monopolize as a formal study the time devoted to language, in a progressive elementary school, but should be used only incidentally in connection with composition and literature.

In several schools there seems to be an attempt to employ

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TABLE XIV.—Showing the Topics in Arithmetic and their Distribution by Grades in the Public Elementary Schools of Ten American Cities.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|--|----|-----|------|-----|----|-----|------|-------|
| Numeration | 10 | 10 | 10 | 8 | 5 | 3 | | 1 |
| Notation | 10 | 10 | 10 | 8 | 5 | 3 | | 1 |
| Relation of Numbers | 7 | 4 | 8 | 1 | 1 | | | |
| Addition | 8 | 9 | 10 | 8 | 3 | 1 | | |
| Subtraction | 5 | 9 | 10 | 8 | 3 | 1 | | |
| Multiplication | 2 | 7 | 7 | 8 | 4 | 1 | | |
| Division | 2 | 5 | 6 | 8 | 6 | 3 | | |
| Fractions | 3 | 4 | 6 | 8 | 10 | 9 | 3 | 4 |
| Denominate Numbers | 6 | 5 | 4 | 9 | 7 | 10 | 6 | 6 |
| Involution and Evolution | | | | 1 | 3 | 2 | 2 | 9 |
| Decimal Fractions | | | | | 4 | 8 | 7 | 3 |
| Mensuration | | | 1 | | 2 | 2 | 3 | 7 |
| Multiplication Tables | | 4 | 5 | 4 | 1 | 1 | | |
| Commission and Brokerage | | | | | | | 5 | |
| Insurance | | | | | | | 5 | 1 |
| Percentage | | | | 1 | 2 | 5 | 7 | 5 |
| Ratio and Proportion | | | | | | 1 | 3 | 5 |
| Partnership | | | | | | | 2 | 4 |
| Partial Payments | | | | | | | 2 | 4 |
| Greatest Common Multiple and Least Common Multiple | | | | 2 | 5 | | | |
| Longitude and Time | | | | | | | 2 | 2 |
| Profit and Loss | | | | | | | 4 | 1 |
| Taxes | | | | | | | 5 | |
| Duties | | | | | | | 1 | |
| Banking | | | | | | | 7 | 1 |
| Exchange | | | | | | | 2 | 2 |
| Simple Interest | | | | 1 | | 3 | 7 | 5 |
| Stocks and Bonds | | | | | | | 3 | 1 |
| Business Forms | | | | | 1 | 3 | 1 | 1 |

correlation by the use of the content of other studies as subject matter for the classes in English. Wherever this is done there is a noticeable absence of good literature in the English course.

GEOGRAPHY.—Each large topic like North America in Table XVI. contains an average of twenty sub-topics in the syllabi examined.

The recurrence of the same topic in different grades is accounted for by the fact that the pupils study the topic from the two points of view: (1) of physical geography, (2) of political geography.

“Globes and maps” includes map-drawing.

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TABLE XV.—Showing the Topics in Language and their Distribution by Grades in the Public Elementary Schools of Ten Cities of the United States.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|------------------------------------|----|-----|------|-----|----|-----|------|-------|
| COMPOSITION | | | | | | | | |
| Conversation and Oral Reproduction | 9 | 8 | 6 | 6 | 6 | 6 | 3 | 2 |
| The Paragraph | | 1 | 1 | 1 | 1 | 2 | 5 | 3 |
| The Sentence | 1 | | 3 | 4 | 3 | 2 | 3 | 1 |
| Written Reproduction | 5 | 6 | 6 | 9 | 7 | 7 | 3 | 5 |
| Model Composition | 1 | 1 | 4 | 5 | 3 | 6 | 8 | 6 |
| Invention | | | | | 1 | 1 | | |
| Topical Outline | | | | | 1 | 2 | 4 | 2 |
| Description | 2 | 4 | 4 | 3 | 3 | 5 | 5 | 2 |
| Narration | 1 | | 2 | 1 | 1 | 2 | 4 | 3 |
| Exposition | | | | | | | 1 | 1 |
| Letter Writing | | | 6 | 4 | 2 | 8 | 3 | 2 |
| Dictation | 2 | 4 | 5 | 3 | 4 | 4 | 2 | 3 |
| Copying | | 2 | 1 | | | | | |
| Summaries | | | | | 1 | 1 | | 3 |
| Rhetoric from Literature | | | | | | | | 1 |
| Rhetoric from Texts | | | | | | | 2 | 1 |
| GRAMMAR | | | | | | | | |
| Simple Sentence | | | | | 1 | | 6 | 4 |
| Compound Sentence | | | | | | | 6 | 4 |
| Complex Sentence | | | | | | | 6 | 4 |
| Capital Letters, Punctuation | 6 | 7 | 7 | 6 | 4 | 2 | 2 | 2 |
| Classification of Sentences | | | 1 | 3 | 2 | 4 | 4 | |
| Inflection and Use Part Speech | | 1 | 1 | 5 | 7 | 9 | 10 | 6 |
| Phrases | | | | | 2 | 3 | 4 | 3 |
| Clauses | | | | | 2 | 2 | 3 | 3 |
| Words | | | | | 3 | 2 | 5 | 3 |
| Analysis | | | | | 4 | 6 | 7 | 8 |
| Synthesis | | | | | | | 2 | 4 |
| Correct Expression | 1 | 1 | 2 | 3 | 1 | 1 | 2 | 2 |
| LITERATURE | | | | | | | | |
| Literature | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 |
| Memorizing Gems | 3 | 5 | 5 | 5 | 3 | 3 | 2 | 3 |
| Stories | 8 | 6 | 4 | 1 | 2 | 1 | 2 | |

In only one of these syllabi is the memorizing of State capitals noticed.

Most of the programs follow the topics as they occur in the text-books on geography.

HISTORY.—The number of assignments made to different wars in contrast to the number made to topics dealing with movements of social and economic interest, is one of the peculiarities shown by Table XVII.

It is suggestive that the avenue through which history seems

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TABLE XVI.—Showing the Topics in Geography and their Distribution by Grades in the Public Elementary Schools of Ten American Cities.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|---------------------------------|----|-----|------|-----|----|-----|------|-------|
| Home Geography | 1 | 2 | 3 | 5 | | | | |
| Directions | 3 | 4 | 1 | 4 | 2 | | | |
| Distance | | 1 | | 3 | | | | |
| The Earth | | 1 | | 3 | 1 | 2 | | |
| Surface | | 1 | 1 | 5 | | 2 | | |
| Land | | | 1 | 5 | 1 | 4 | | |
| Water | | | 1 | 5 | 1 | 4 | | |
| Revolution of Earth | | | | 5 | 3 | 3 | | 1 |
| Rotation of Earth | | | | 5 | 3 | 3 | | 1 |
| Zones | | | | 4 | 4 | 3 | | |
| Plants | | 1 | | 2 | 1 | 3 | 1 | 1 |
| Animals | | 1 | | 3 | 1 | 4 | 1 | 1 |
| Products | | | 1 | 2 | 1 | | 1 | |
| Minerals | | | 1 | 2 | 1 | | | |
| Occupations | | | | 2 | 5 | 3 | | |
| Governments and Religions | | | | 1 | 1 | | | |
| Races of Men | | 1 | 1 | 6 | 1 | 5 | 1 | 1 |
| Hemispheres | | | | 4 | | 2 | | 1 |
| Continents | | | | 5 | 2 | 2 | | |
| Oceans | | | | 5 | 2 | 2 | | |
| North America | | | | 5 | 7 | 6 | 2 | |
| United States | | | | 5 | 4 | 5 | 1 | |
| New England States | | | | 4 | 2 | 4 | | |
| Middle Atlantic States | | | | 3 | 2 | 4 | | |
| Southern States | | | | 4 | 2 | 4 | | |
| Central States | | | | 3 | 2 | 4 | | |
| Rocky Mountain & Pacific States | | | | 4 | 2 | 4 | | |
| Review of United States | | | | 1 | | | | |
| Canada | | | | 2 | 3 | 1 | 3 | |
| Mexico | | | | 2 | 3 | 1 | 3 | |
| Review of North America | | | | 1 | 1 | | | |
| South America | | | 1 | 3 | 6 | 5 | 5 | 1 |
| Europe | | | 1 | 1 | 6 | 6 | 7 | |
| Asia | | | 1 | 1 | 5 | 6 | 6 | 1 |
| Africa | | | 1 | 1 | 4 | 5 | 7 | 1 |
| Australasia | | | 1 | 1 | 3 | 5 | 7 | 1 |
| Latitude & Longitude | | | | | 4 | 3 | 2 | |

to be finding its way into the grades below the sixth is the historical and biographical narrative. This, we think, is psychologically sound, for the child is interested primarily in people. The performances of heroes and the activities of his own acquaintances are the two aspects of child experience which lend themselves most directly to the beginning of the study of history. Therefore the first two topics in Table XVII. commend themselves as a departure in the right direction.

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TABLE XVII.—Showing the Topics in History and their Distribution by Grades in the Public Elementary Schools of Ten Cities of the United States.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|---|----|-----|------|-----|----|-----|------|-------|
| American Historical & Biographical Narratives | 2 | 3 | 4 | 7 | 7 | 5 | 1 | 2 |
| Local History | 2 | 1 | 1 | 3 | 2 | 2 | | |
| Discoveries | | | 2 | 4 | 2 | 3 | 4 | 1 |
| Explorations | | | 1 | 2 | 2 | 3 | 2 | |
| Settlements | | | 1 | 1 | 3 | 4 | 3 | |
| Colonies | | | | 1 | 2 | 3 | 4 | 1 |
| Colonial Government | | | 1 | | | 1 | 2 | 1 |
| Revolution | | | 1 | 3 | 2 | 4 | 5 | 1 |
| Articles of Confederation | | | | | | 2 | 4 | 2 |
| Constitution | | | | | 1 | 1 | 4 | 5 |
| Amendments to Constitution | | | | | | | 2 | 5 |
| French & Indian War | | | | | 2 | 3 | 6 | 2 |
| War of 1812 | | | | 1 | | 2 | 2 | 6 |
| Mexican War | | | | | | 2 | 2 | 5 |
| Civil War | | | 1 | | 4 | 2 | 7 | |
| Spanish-American War | | | | | | 3 | 1 | 7 |
| Territorial Expansion | | | | | | 3 | 1 | 5 |
| Inventions & Discoveries | | | | 1 | | 4 | 2 | 5 |
| Rise of Republican Government | | | | | 1 | | 4 | 4 |
| Economic Progress | | | | | | 1 | 1 | 7 |
| Slavery | | | | | | 4 | 2 | 1 |
| Presidential Administration | | | | | | 3 | | 2 |
| Review of United States History | | | | | | | 1 | 4 |
| War of Tripoli | | | | | | 1 | 1 | 1 |
| Era of Good Feeling | | | | | | 1 | 1 | 3 |
| Monroe Doctrine | | | | | | 1 | 1 | 2 |
| Missouri Compromise | | | | | | 1 | 1 | 3 |
| Nullification | | | | | | 1 | 1 | 3 |
| Panic of 1837 | | | | | | 1 | 1 | 3 |
| Analysis of National Government | | | | | | 1 | 2 | 1 |
| Political Parties | | | | | | | | 1 |
| Analysis of State Government | | | | | | | 1 | 2 |
| City Government | | | | 1 | | 2 | | 3 |
| State History | | | | | 1 | 1 | 1 | 1 |
| Ethical Lessons | | | | | 1 | 1 | 1 | 1 |
| English History | | | | | | | 2 | 2 |

Next to nature study, perhaps no study in the syllabi examined shows greater lack of organization than does elementary history.

NATURE STUDY.—One of the most eminent teachers of nature study, in a recent address on the subject, said that nature study is not a science. An examination of the syllabi on that subject calls forth a ready concurrence with that

TABLE XVIII.—Showing the Topics in Nature Study and their Distribution by Grades in the Public Elementary Schools in Ten Cities of the United States.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|-------------------------------|----|-----|------|-----|----|-----|------|-------|
| Seeds | 2 | 2 | 2 | 4 | 1 | 1 | 2 | 1 |
| Germination of Seeds | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 |
| Plants | 4 | 4 | 6 | 8 | 5 | 5 | 3 | 3 |
| Plant Awakening | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 |
| Buds | 1 | 1 | 1 | 1 | 2 | | | |
| Roots | 1 | 2 | | | | 1 | | |
| Leaves | 3 | 4 | 4 | 1 | 3 | 3 | 1 | 2 |
| Flowers | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 |
| Trees | 4 | 3 | 3 | 6 | 5 | 4 | 3 | 5 |
| Sap | | | | | | | 1 | |
| Nuts | 1 | 1 | | 2 | | | | 1 |
| Fruits | 5 | 2 | 3 | 5 | 3 | 5 | 2 | 1 |
| Grain | | 1 | | 2 | | | | |
| Stems | 1 | | | | | | | |
| Effects of Freezing on Plants | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| Foods | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Insects | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 |
| Caterpillars | 1 | 1 | | | | | | |
| Cocoons | 1 | 1 | | | | | | |
| Worms | | 1 | | | | | | |
| Spiders | | 1 | | 1 | | | | |
| Snails | | | | 1 | | | | |
| Fish | | | 1 | 1 | | | | |
| Tadpole | | 1 | | | | | | |
| Birds | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| Homes and Coverings | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| Animals | 4 | 6 | 5 | 3 | 2 | 5 | 2 | 2 |
| Animal Movements | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Skeletons | | | | | | 1 | | |
| Forms of Water | | 2 | | | 1 | 1 | | |
| Wells and Springs | | | | 1 | 1 | 1 | | |
| Streams | | | | 1 | 2 | 1 | | |
| Soil | | | 1 | 2 | 1 | 1 | | |
| Erosion | | | | 1 | 2 | 1 | | |
| Effect of Freezing on Soil | | | | 2 | 1 | 1 | | |
| Hills & Valleys | | | | | 2 | | | |
| Rocks | | 1 | | 1 | 1 | 2 | | |
| Rock Formations | | | | 1 | 1 | 1 | | |
| Corals | | | | 1 | 1 | 1 | | |
| Fossils | | | | 2 | 1 | 2 | | |
| Minerals | | 1 | 3 | 1 | 2 | 1 | 1 | |
| Metals | | | 1 | | | | | |
| Earth Study | | | 1 | 1 | | | | |
| Phenomena of Nature | 2 | 1 | 2 | | 1 | 2 | 2 | |
| Weather | 3 | 2 | 3 | 4 | 4 | 3 | 2 | 4 |
| Wind | | 1 | | | | | | 1 |
| Heat | | 1 | | | 1 | | 1 | 1 |
| Frictional Electricity | | | | | | | 1 | 1 |
| Light | | 1 | | | | | 1 | 1 |
| Lenses | | | | | | | 1 | 1 |
| Air & Liquids | | | | 1 | | | 1 | 2 |
| Lever | | | | | | | 1 | 1 |
| Property of Matter | | | | | | | 1 | 1 |
| Common Facts in Physics | | | | | | 2 | 3 | 3 |

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opinion, if organization is one of the characteristics of a science. Table XVIII. is corroborative evidence of such an opinion. There is no subject taught in the American schools which so greatly needs unification. As it is now taught, the subject may include any topic in the entire natural universe. We shall have to remember soon that when Comenius once attempted universal knowledge as an aim of education he failed for want of a capable student.

After studying Table XVIII. carefully, one would guess that when the basis for systematizing this most incoherent study is found it will lie more in the vicinity of a simplified observational botany and zoology than in the geological, physical and chemical aspects of the study as it is now taught.

5. The Historical Development of the Course of Study of Five Cities, Showing the Direction of Growth since 1868.

In order to corroborate or refute certain conclusions reached in the study of previous tables regarding the relative importance of subjects, and to discover the direction in which the enrichment of the elementary curriculum has tended in recent years, a brief historical study has been made of five American city schools. This has been done in the hope of taking one step more toward a discovery of the ideal American course of study. While merely a type study, it ought to possess some value in proportion as the cities are representative American cities.

Tables XIX.-XXIII. show the elementary school curriculum in New York, Boston, Chicago, Louisville and St. Louis for the years 1868, 1888 and 1904. The subjects taught and the grades in which they are taught in the three respective years are given. In 1888 and 1904 the tables show the minutes per week in each subject and in each grade, and also the percentage of total time occupied by each branch of instruction.

TABLE XIX.—Showing the Curriculum of the Public Elementary Schools of New York City for the Years 1888, 1888 and 1904; also showing Percentage of Total Time devoted to Each Subject for Years 1888 and 1904.

| Grade | 1888 | | | | | | | | | | | | 1904 | | | | | | | | | | | | Pct. |
|--|------|---|---|---|---|---|---|---|---|----|----|----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| 1 Opening Exercises | x | x | x | | | | | | | | | | | | | | | | | | | | | | |
| 2 Reading | x | x | x | x | x | x | x | x | x | x | x | x | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 5.8 |
| 3 Writing | x | x | x | x | x | x | x | x | x | x | x | x | 100 | 125 | 125 | 75 | 75 | 75 | b | b | b | b | b | b | 5.5 |
| 4 Spelling | x | x | x | x | x | x | x | x | x | x | x | x | b | b | b | b | b | b | b | b | b | b | b | b | |
| 5 Grammar | x | x | x | x | x | x | x | x | x | x | x | x | b | b | b | b | b | b | b | b | b | b | b | b | |
| 6 Language | | | | | | | | | | | | | 450 | 510 | 460 | 375 | 375 | 375 | 360 | 320 | 300 | 320 | 300 | 300 | 30.9 |
| 7 Composition | | | | | | | | | | | | | b | b | b | b | b | b | b | b | b | b | b | b | |
| 8 Arithmetic | x | x | x | x | x | x | x | x | x | x | x | x | 120 | 160 | 150 | 150 | 150 | 200 | 160 | 160 | 160 | 160 | 160 | 160 | 12 |
| 9 Geography | x | x | x | x | x | x | x | x | x | x | x | x | 135 | 120 | 120 | 120 | 120 | 120 | 80 | 80 | 80 | 80 | 80 | 80 | 4.3 |
| 10 History | | | | | | | | | | | | | | | | | 90 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 4.3 |
| 11 Civics | | | | | | | | | | | | | | | | | c | c | c | c | c | c | c | c | |
| 12 Object Lessons | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | |
| 13 Elementary Science | x | x | x | | | | | | | | | | | | | | | | | | | | | | |
| 14 Nature Study | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 Physiology & Hygiene, Physical Training | | | | | | | | | | | | | 90 | 90 | 90 | 75 | | | | | | | | | 4.2 |
| 16 Drawing | | | | | | | | | | | | | 210 | 165 | 165 | 165 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 10 |
| 17 Music | | | | | | | | | | | | | 160 | 160 | 160 | 120 | 120 | 120 | 80 | 80 | 80 | 80 | 80 | 80 | 9.8 |
| 18 Manual Training, Cooking & Sewing | | | | | | | | | | | | | 60 | 60 | 60 | 60 | 60 | 60 | | | | | | | 4.6 |
| 19 Punctuation | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 Foreign Language or Stenography | | | | | | | | | | | | | 60 | 60 | 60 | 60 | 60 | 60 | 80 | 80 | 80 | 80 | 80 | 80 | 1.9 |
| Total | | | | | | | | | | | | | 1315 | 1395 | 1385 | 1305 | 1280 | 1285 | 1225 | 1225 | 1225 | 1225 | 1225 | 1225 | 1265 |

The presence of any letter in the above columns signifies that the subject was taught in that particular grade and year.
 (a) Language in 1888 includes reading, spelling, and grammar. (b) Language in 1904 includes reading, spelling, memorizing, composition, and grammar. (c) In 1888 and 1904, history includes civics.
 Table for the year 1868 compiled from Barnard's American Journal of Education, pp. 469-576; for 1888 from U. S. Commissioner's Report, 1888-89, vol. I., pp. 369-411. Tables XX., XXI., XXII., XXIII. for years 1868 and 1888 are made from same sources.

TABLE XX.—Showing the Curriculum of the Public Elementary Schools of Boston for the Years 1868, 1888 and 1904; also showing Percentage of Total Time devoted to Each Subject for Years 1888 and 1904.

| | 1868 | | | | | | | | 1888 | | | | | | | | 1904 | | | | | | | | | | |
|-------------------------|------|---|---|---|---|---|---|-----|------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pct. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pct. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pct. |
| 1 Opening Exercises | | | | | | | | | | | | | | | | | | | 60 | 60 | 60 | 30 | 30 | | | | |
| 2 Morals | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 Reading & Manners | x | x | x | x | x | x | x | | | x | | | | | | | | | 600 | 500 | 600 | 240 | 240 | 240 | 210 | 180 | 23.3 |
| 4 Writing | x | x | x | x | x | x | x | | | x | | | | | | | | | b | b | b | b | b | b | b | b | |
| 5 Spelling | x | x | x | x | x | x | x | | | x | | | | | | | | | b | b | b | b | b | b | b | b | |
| 6 Grammar | x | x | x | x | x | x | x | | | x | | | | | | | | | b | b | b | b | b | b | b | b | |
| 7 Language | | | | | | | | | | x | | | | | | | | | 200 | 200 | 200 | 300 | 300 | 270 | 240 | 240 | 17.7 |
| 8 Punctuation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 Declamation | | | | | | | | | | | | | | | | | | | b | b | b | b | b | b | b | b | |
| 10 Composition | | | | | | | | | | | | | | | | | | | 160 | 210 | 210 | 270 | 270 | 270 | 210 | 16.2 | |
| 11 Arithmetic | x | x | x | x | x | x | x | 120 | 210 | 210 | 270 | 255 | 270 | 195 | 180 | 18.6 | | | | | | | | | | | |
| 12 Geography | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 History | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 Object Lessons | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 Elementary Science | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 Nature Study | | | | | | | | | | 120 | 120 | 120 | 120 | 120 | | 8.6 | | | | | | | | | | | |
| 17 Physiology & Hygiene | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 Physical Training | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 Drawing | | | | | | | | | | 90 | 90 | 90 | 50 | 50 | 50 | 4.6 | | | 60 | 90 | 90 | 80 | 80 | 80 | 80 | 60 | 6 |
| 20 Singing | | | | | | | | | | x | x | x | 90 | 90 | 90 | 6.8 | | | 100 | 150 | 150 | 90 | 90 | 90 | 90 | 7.1 | |
| 21 Manual Training | | | | | | | | | | 60 | 60 | 60 | 60 | 60 | 60 | 4.6 | | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 4.3 |
| 22 Book-keeping | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 Total | | | | | | | | | | x | | | | | | | | | 1350 | 1350 | 1350 | 1400 | 1400 | 1400 | 1400 | 1400 | |

(a) Grammar in 1888 includes writing, spelling and language in all grades; and reading in the first three grades.

(b) Language in 1904 includes grammar, spelling, writing and composition.

(c) The percentage of total time for elementary science in 1888 includes physiology and hygiene.

(d) Elementary science and nature study in 1904 include physiology and hygiene.

TABLE XXII.—Showing the Curriculum of the Public Elementary Schools of St. Louis for the Years 1888, 1888 and 1904; also Percentage of Total Time devoted to Each Subject for the Years 1888 and 1904.

| | 1888 | | | | | | | | | | 1904 | | | | | | | | | |
|-----------------------|------|---|---|---|---|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|------|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pct. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Pct. | | |
| 1 Opening Exercises | | | | | | | | | | | | | | | | | | | | |
| 2 Reading | x | x | x | x | x | 650 | 350 | 300 | 300 | 180 | 180 | 25 | 400 | 250 | 125 | 150 | 120 | 90 | 30 | 3 |
| 3 Writing | x | x | x | x | x | 100 | 125 | 120 | 120 | 90 | 90 | 7.1 | 100 | 125 | 125 | 125 | 120 | 90 | 90 | 12 |
| 4 Spelling | x | x | x | x | x | 200 | 100 | 150 | 150 | 150 | 150 | 10.3 | | 150 | 75 | 60 | 30 | 30 | 6.5 | |
| 5 Grammar | | | | | | | | | | 240 | 240 | 4.1 | | | | | | | | |
| 6 Language | | | | | | 60 | 75 | 90 | 90 | | | | 40 | 50 | 75 | 60 | 60 | 90 | 120 | 7.3 |
| 7 Declamation | | | | | | | | | | | | | | | | | | | | |
| 8 Arithmetic | x | x | x | x | x | 200 | 250 | 300 | 600 | 300 | 300 | 19.3 | 100 | 125 | 150 | 150 | 150 | 150 | 150 | 15.2 |
| 9 Geography | x | x | x | x | x | | 150 | 180 | 180 | 180 | 180 | 8.9 | | | | | | | | |
| 10 History | | | | | | | | 50 | 30 | 30 | 30 | 1.7 | | | | | | | | |
| 11 Civics | | | | | | | | | | | | | | | | | | | | |
| 12 Elementary Science | | | | | | | | | | | | | | | | | | | | |
| 13 Nature Study | | | | | | 20 | 30 | 50 | 60 | 60 | 30 | 2.9 | | | | | | | | |
| 14 Physical Training | x | x | x | x | x | 50 | 50 | 50 | 50 | 50 | 50 | 4.3 | 20 | 25 | 25 | 30 | 30 | 30 | 30 | 3.1 |
| 15 Drawing | x | x | x | x | x | 100 | 100 | 100 | 100 | 90 | 90 | 6.5 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 5.4 |
| 16 Singing | x | x | x | x | x | 70 | 65 | 75 | 80 | 80 | 80 | 6.2 | 100 | 100 | 100 | 90 | 90 | 90 | 90 | 10 |
| 17 German | | | | | | | | | | x | x | x | 15 | 25 | 25 | 30 | 30 | 30 | 30 | 3 |
| Total | | | | | | 1450 | 1445 | 1505 | 1790 | 1480 | 1540 | 1420 | 845 | 925 | 875 | 910 | 865 | 890 | 880 | |

TABLE XXIII.—Showing the Curriculum of the Public Elementary Schools of Louisville, Ky., for the Years 1868, 1888 and 1904; also showing Percentage of Total Time devoted to Each Subject for the Years 1888 and 1904.

| Grade | 1868 | | | | | | | | 1888 | | | | | | | | 1904 | | | | | | | | Pct. |
|-------------------------|------|---|---|---|---|---|---|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1 Opening Exercises | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 2 Reading | x | x | x | x | x | x | x | x | 300 | 300 | 300 | 240 | 180 | 120 | 90 | 90 | 16.7 | 500 | 500 | 425 | 335 | 235 | 250 | 150 | 1.9 |
| 3 Writing | x | x | x | x | x | x | x | x | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 50 | 100 | 100 | 100 | 90 | 70 | 70 | 70 | 4.6 |
| 4 Spelling | x | x | x | x | x | x | x | x | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 100 | 100 | 100 | 100 | 100 | 75 | 75 | 75 | 6.7 |
| 5 Grammar | x | x | x | x | x | x | x | x | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 2.8 |
| 6 Language | x | x | x | x | x | x | x | x | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 100 | 220 | 250 | 150 | 150 | 150 | 150 | 150 | 6.9 |
| 7 Composition | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 8 Arithmetic | x | x | x | x | x | x | x | x | 120 | 180 | 180 | 180 | 240 | 240 | 240 | 240 | 16.7 | 100 | 205 | 250 | 250 | 250 | 240 | 240 | 17.2 |
| 9 Geography | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 10 History | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 12 Object Lessons | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 14 Nature Study | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 15 Physiology & Hygiene | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| 16 Physical Training | x | x | x | x | x | x | x | x | 90 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 4.6 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 2.4 |
| 17 Drawing | x | x | x | x | x | x | x | x | 180 | 120 | 120 | 120 | 120 | 120 | 120 | 90 | 9.6 | 75 | 75 | 75 | 75 | 90 | 90 | 90 | 6.3 |
| 18 Music | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| Punctuation | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | |
| Total | | | | | | | | | 1230 | 1200 | 1200 | 1110 | 1110 | 1170 | 1485 | 1485 | 960 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 | 1350 |

95.5
100

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In presenting the points of interest in Tables XIX.-XXIII., it has been thought well to restrict the discussion to those branches of instruction which best show the direction of the enrichment of the curriculum in the last thirty years.

By comparing the foregoing tables this trend of development may be quite clearly seen. It is observable in two ways: first, by study of the subjects and topics which are introduced from time to time; and second, by study of the decrease and increase of time allotted to those subjects which have been in the course of study from the beginning.

ENGLISH.—Grammar is the only subject in any of the programs in 1868 to cover the various topics which we now include under the term English. Language lessons were added to this topic by 1888. Just what the term meant is not clear, but it evidently meant something other than formal grammar. The evidence shows that it included composition, but not nearly so much literature as is included under the concept language lessons, in 1904. There was absolutely nothing in the curricula of 1868 to resemble the subject literature. Literature in the elementary grades is comparatively recent, certainly it does not occur much earlier than 1888.

DRAWING.—Drawing is one of the subjects added in 1888 by four of the five cities. It appeared on the program of the schools of Boston in 1868 in the four upper grades and was added in the lower grades in 1888. Of the five cities, therefore, Boston alone had drawing in 1866, and that only in four grades.

ELEMENTARY SCIENCE AND NATURE STUDY.—All of these cities except St. Louis had on their programs in 1868 a subject called object lessons, which was the forerunner of elementary science and nature study, but certainly was not exactly either at that time. It was displaced by the topic elementary science in 1888, except in New York, where it was dropped and no science substituted.

The term nature study is more modern but includes practically the same subject matter as elementary science. It is not in any of the 1888 programs, but appears, connected usually with elementary science, upon all the five in 1904. The subject physiology and hygiene was added in 1904 in three of the cities. Boston had already added it in 1888. St. Louis seems not to have added it yet.

MANUAL TRAINING.—Manual training is found on no program in 1888. It is the one distinctively modern subject. All of the five cities except Louisville teach it in 1904. New York has gone farther perhaps than any other American city in this line of work. When drawing and constructive work are included in the subject, about 15 per cent of that city's recitation time is at present devoted to manual training.

CIVICS.—There is a clearly marked tendency either to make a separate subject of civics, or to add extra time to history and teach it as part of that subject, which amounts to the same thing.

The above five topics represent the newly introduced subjects and show the direction in which the curriculum is growing.

It is interesting to observe that while these additions were made, there have been practically no omissions during the past thirty-six years. Those topics occurring in 1868 were included in the larger subjects introduced in later years. Even "morals and manners" is provided for and specifically mentioned in 1904 under the new topic "opening exercises."

6. *Time Allotment.*

The direction of growth in the curriculum during the last thirty-six years may be seen not only in the addition of subjects but by a comparison of the time allotted to the several subjects in each grade upon the basis of a week's work.

Except St. Louis (whose decrease of total recitation time

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in the eight grades per week from 11,680 in 1888 to 7,370 in 1904 is unaccountable) all the cities show a total increase of time spent in recitations per week in all the grades together, which ranges from two thousand to four thousand minutes. That is, the increase of recitation time is about thirty or sixty minutes a day in each grade.

But the interesting comparison is that of the increase or decrease of percentages of time assigned to different subjects. Manifestly, the subjects regarded as most important receive a greater percentage of increase of the total recitation time per week. The tendency toward emphasis on specific subjects may not be noticed so readily from the increase or decrease of minutes of weekly recitation time as it will be discovered from the study of the relative percentage of increase or decrease of recitation time. This is illustrated forcibly in the case of the subjects studied in detail below. The total weekly recitation time per grade from 1888 to 1904 was increased, which means that the recitation time of each subject was increased, and yet the subjects below usually lost in percentage of recitation time. That is, they received less than their proportion of the general increase of recitation time. For the purpose of showing the increase or decrease of importance attached to subjects during recent years, the relative percentages have been tabulated in the last column to the right in the tables for 1888 and 1904. These are derived by dividing the total time spent in all the grades in teaching a given subject by the total time spent in all the grades in teaching *all* the subjects.

ARITHMETIC has lost time in three of the curricula and gained in two. In Louisville it gained only one per cent in the thirty-six years, while in New York it lost nearly sixteen per cent, i. e., its relative per cent in 1888 was 26.2, and in 1904 10.2 per cent. But even in 1904 in all the curricula it received a proportion of time second only to reading. The extremes

in the change of time assigned arithmetic are in New York and Chicago, the former decreasing its relative time 16 per cent, and the latter increasing it 9 per cent.

SPELLING, READING AND ENGLISH.—These subjects have lost in the sixteen years from 1888 to 1904 in probably every case, with the exception of reading in Louisville. If one includes under the one branch of instruction English, all the subjects, reading, writing, grammar, language lessons, composition and spelling, there is no exception to the loss of time, notwithstanding the fact that there has been an admitted increase of time in literature and language lessons. The loss is mainly in spelling, reading and formal grammar.

GEOGRAPHY AND HISTORY.—Both these subjects, though occupying a minor amount of time in comparison with the subjects just discussed, have yet gained in time. The gain averages approximately 3 per cent for the two subjects taken together. Geography gains more than history. The latter subject is still taught in the upper grammar grades, its advocates seeming to fear to allow it to stray very far from the high school.

So much for the curriculum of the public elementary schools at the present time in five of the larger American cities. Prophecy is beyond the bounds of this paper, but it would be interesting to know whether other cities will follow the radical departure just entered upon by New York City. In this city as in no other city of the United States, subjects other than the "three R's" have received much attention in the curriculum. Reading, writing, spelling, grammar, language lessons, composition, arithmetic, geography and history receive barely 60 per cent of the allotted time. In other words, those subjects which were given practically all the time only a few years ago, and which even in New York were given 90 per cent of the time, have suddenly been cut down to a little over half of the time. The superintendents of several of the

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larger cities are reorganizing their courses of study at present. Among others, Boston, San Francisco and Chicago are making changes. Will the New York curriculum in its extreme movement towards what are known as the content studies be followed by these superintendents, or will New York under force of popular conservative opinion be forced to retreat from its present curriculum? Whatever is agreed upon for the larger cities of the United States will be followed by the rest of the progressive city school systems, many of which will advance just a step farther in the development than the point around which the large cities settle down. For after all, the large cities set the ideals, but the smaller towns suburban to these cities more nearly attain the ideal, owing to the absence of the complex system by which the larger cities are hampered. The smaller cities of America are greatly influenced in the matter of admission of subjects into the curriculum by the practice in the larger cities. For this reason, considerable importance ought to be attached to the tendencies in the development of the curricula of such cities as the five reviewed, as well as to the curricula of the ten whose time allotments have been discussed in previous pages.

CHAPTER II.

THE CURRICULUM OF PUBLIC ELEMENTARY SCHOOLS IN CITIES OF ENGLAND.

1. *Administration Relating to the Elementary Curriculum.*

According to the English Education Act of December, 1902,* which went into effect March, 1903, the Councils of every county and of every county borough became the authorities for the public elementary schools of England. In boroughs of ten thousand people, and in municipalities of over twenty thousand, their respective Councils became the local education authority for elementary schools. These several sets of Councils manage the schools through a Board of Managers appointed for each school. In the case of Council schools (entirely public schools), they appoint four of the six Managers. In the case of Voluntary schools (partly Church and partly public schools), the Councils appoint only one of the six Managers, the Church appointing four and the vicinity one.

These special Managers under the new law exercise the larger control over the public elementary schools of England. They either choose the course of study or delegate this choice to the head master. In a town with many schools the Board of Managers of each school has power to decide all matters relative to the curriculum of that school. Consequently, every school in a city system may have a different course of study. In fact this is largely true with respect to the time assignments

*Code of 1903, National Union of Teachers' edition, pp. 207-231.

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made to the different subjects, although with reference to the subjects taught there is a close uniformity throughout all England, for reasons soon to be explained.

Let it not be forgotten, however, in the study of the English elementary school curriculum, that the school is the unit. In no school system of the four modern progressive types included in this study, are there such extremely individualistic tendencies to be found. In the English schools the individual is everything, whereas in Germany and France he is nothing in contrast with the needs of the State. The individual is reached through the agency of the school under the present English law. The individual environment has quite as large a place in the school as the individual child. The gentlemen who furnished the seventy-eight syllabi of the different schools for this study, analyzed the environments from which the children came, and endeavored to show the influence these environments have upon the content and emphasis in the curriculum. The following study will reveal the fact that the adaptation to environment is far better provided for in the English elementary schools than in the schools of the other countries under discussion.

Individualism of some kind has been the ideal since the establishment of the English elementary system in 1870. In 1873, I. Todhunter in his "Conflict of Studies" (p. 3), after discussing the different possible aims of education in his country, said: "Possibly, however, the end which is usually sought is the good of the individual rather than the State." The prevalence of this conception has seriously militated against the perfection, even against the possibility, of a system of elementary schools. There is a tendency in recent years towards uniformity and away from individualism, but it has not yet revolutionized the curriculum. This, then, is a veritable antithesis to the French bureaucratic system. A recent English writer has expressed it very well in saying: "France

protests against the tyranny of the State, while England asks for more help from the State."

Let us next examine the aid given by the central authority, and see how it secures its control in virtue of said aid. The Board of Education in England has charge of the State's interests in education. It purchases this control by subsidizing the schools from the State exchequer. It does not assume in a high-handed way, without consent of the people, the authority to interfere in public education. But it subsidizes those schools which agree to teach what it considers certain essential subjects in certain essential ways, and it refuses to grant aid to those which do not acquiesce in its requests. The individual Board of Managers may still teach what it pleases, but it forfeits the grant from the State treasury by so doing, unless its pleasure coincides with that of the Board of Education.

So the Board of Education exercises an inhibitive authority over the elementary curriculum. This it does, just as is done in France, by naming a minimum curriculum with certain elective studies which must be taught in a manner satisfactory to His Majesty's Inspector, sent out by the Board of Education to examine and report upon every school. The public Infant School (containing pupils from three to seven years of age) which satisfies H. M. Inspector passably well will receive from the State treasury sixteen shillings per pupil. The Infant School which pleases him very well will receive seventeen shillings. The public Elementary School will receive twenty-one shillings when it is fairly satisfactory and twenty-two shillings when it is very satisfactory to the Inspector. This grant in 1900 paid 38.4 per cent of all money spent on elementary education.*

In order to satisfy the Inspector, there must be four hundred

*"The Making of Citizens,—a Study in Comparative Education," R. W. Hughes, p. 130.

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school sessions a year, i. e., (counting morning and afternoon each a session) two hundred school days. In the Infant Schools these sessions must not continue for a shorter time than one and one-half hours each, and in the Elementary School not less than two hours in the afternoon and two in the morning. Later we shall see that the average is never less than five hours per day, frequently six.

One other condition which the Inspector exacts of the local authorities is that they shall see to it that every child between the ages of five and fourteen shall attend the public or some other good elementary school, unless excused at the age of twelve by passing an examination of proficiency, or at the age of thirteen by virtue of having been present for five successive years at three hundred and fifty annual sessions.

Furthermore, the time-table of studies must be posted in each school room, and approved and signed by the Inspector on behalf of the Board. Before the Inspector is allowed to sign this time-table it must provide for the teaching, by an approved teacher, of the following subjects:

In Infant Schools (age three to seven):

1. The elements of reading,
2. The elements of writing,
3. The elements of arithmetic,
4. Needlework (for girls),
5. Drawing (for boys),
6. Appropriate and varied occupations,
7. Simple lessons in common things (akin to nature study),
8. Singing,
9. Simple physical exercises.

In schools for older children (age seven to fourteen), the subjects as a rule required of all children are:

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1. English, by which is understood
 - (a) Reading,
 - (b) Recitation, i. e. memorizing gems of literature,
 - (c) Writing,
 - (d) Composition,
 - (e) Grammar (so far as it bears upon the correct use of language),
2. Arithmetic,
3. Geography,
4. History,
5. Common things (akin to nature study and elementary science),
7. Physical training,
8. Drawing (for boys),
9. Needlework (for girls).*

Besides the foregoing list of studies, which are required only in the sense that the parliamentary grant to the amount of five or six dollars per pupil is given for teaching them, there is a second list of electives prescribed by the central authority "one or more of which is to be taken when the circumstances of the school *in the opinion of the Inspector*, make it desirable." These are: algebra, Euclid, mensuration, mechanics, chemistry, physics, elementary physics and chemistry, animal physiology, hygiene, botany, principles of agriculture, horticulture, navigation, Latin, French, Welsh (for scholars in schools of Wales), German, book-keeping, shorthand, domestic economy or domestic science, drawing (for girls), and needlework (for boys). Of course there is no extra subsidizing from the treasury for the one study selected from this list.

A list of motor active studies is furnished, however, for the

*In future discussions this list of nine subjects is referred to as the "required" studies, with the idea that it is required for the State grant.

teaching of each of which an extra grant is allowed. The studies of this nature offered to girls are: cookery, laundry work, household management; those offered to boys, cottage gardening, and manual instruction, also cookery for boys in seaport towns.*

Before further inquiry respecting the English elementary curriculum is possible, the question must be answered whether the course of study from an administrative point of view is compulsory and fixed for all England, or whether it is largely optional and adaptable to the needs of various environments. At first glance, it would seem to be just as binding upon the different school Managers to adopt the Board's prescribed course, with emphasis upon such divisions as the Board indicates, as is the requirement of the local authority in France or Germany, where a somewhat despotic control seems to operate. The power of the Inspector through the Board of Education over the national exchequer is so great that for all practical purposes the course of study prescribed to him by the Board, and through him prescribed for the school, is compulsory. For every one knows that rarely will a Board of Managers throw away the State grant by refusing to teach the course of study prescribed by the State.

It is true the terminology has been so changed during recent years that the law does not specifically say that the first division of studies *shall* be taught in every school. And this seems to be very gratifying to the English people. A recent writer upon the subject has gone so far as to say: "The control of the people over the schools is complete,—that is so far as the State is concerned. The curriculum of the schools is no longer prescribed by the State; all that the State retains is the power of veto in cases where the efficiency of the school is liable to be impaired.†

*National Union of Teachers' edition of Code, p. 11.

† "The Making of Citizens," Hughes, p. 33.

And yet, notwithstanding this rather emphatic statement by an Englishman, it is a fact that the Code does require that each principal teacher at the beginning of the year shall prepare a course of study and a syllabus covering the entire year, both of which must be passed upon by His Majesty's Inspector before the annual per capita grant of five or six dollars will be paid to the school. It will also be observed upon later pages of this study, that those subjects of instruction for which the State bounty is given, appear to very many and different environments to possess qualities very superior to those that do not draw the State grant. The question is, does not the legal suggestion of the Board as expressed in the Code amount to the same thing as, and open the opportunity for, a system strictly bureaucratic in reference to the curriculum of the elementary schools?

If the further response is made that this cannot be true, inasmuch as no time allotment is required by the State, one could reply by quoting from the Code of 1903 (Act 79), which shows one of the general conditions of the grant to be that "the time table must be approved for the school by the Inspector on behalf of the Board." In one corner of the time table is a space in which the number of minutes per week assigned to each subject is to be posted. So that the Inspector practically passes upon the time allotments as well as upon the distribution of subject matter throughout the grades, which is about all the German and French Inspectors are allowed to do.

The possibilities, then, are present for a bureaucratic system. The fact that the government of the curriculum of England is not strictly bureaucratic is due to the liberality of interpretation upon the part of the Inspector and the Board, and to a vigorous democratic sentiment among the masses.

In the presence of these last mentioned factors, it cannot

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be correctly said that the curriculum is compulsory for all the country. The question is largely left to the Head Master, the Local Managers, and the Inspector, the last of whom is easily satisfied. So delicate is the balancing of powers between the Local Managers and the Board at London that no conflict arises. The Board in the Revised Instructions for 1903 specifically says: "The greatest freedom possible is allowed to Managers and teachers in planning and carrying out the courses of instruction comprising these subjects. It is not required that all of them should be taught in every class of the school, and one or more of them may be omitted in any school which can satisfy *the Inspector and the Board* that there is good reason for such omission."* This refers to the subjects included in the first ten numbers in Table XXIV. The Board claims the right of veto in case of inefficient expenditure of the State's funds. It is possible, although I cannot admit that it appears in the least probable from all the cases here studied, that the majority of local Managers would prefer these same subjects taught their children if there were no suggestion upon the part of the State.

We really have presented to us for the first time a course of study which is both compulsory and optional; both required by the central authority of a bureaucratic government, and yet elective to suit the needs of the individual environment of a democratic people. Truly it seems a paradox, yet who knows but that the remedy for the static condition of the curriculum on the one hand, and of the loose, unrelated and ununified curriculum on the other hand may not be found in the British ideal? The French and Germans complain of too much organization, too much uniformity, and too little provision for the individualistic, while in America we complain of too large a provision for the purely individualistic and a total absence of that necessary relation between the course of

*Revised Instructions for 1903, p. 70.

study in one town and another. Have not the English, upon the administrative side, a suggestion for the three other nations?

2. *The Adoption by Schools of the Curriculum Prescribed by State.*

The English system of prescribing the elementary curriculum is peculiarly interesting to the American, who in recent years has grown most enthusiastic over the perfection of the German bureaucratic system of public education, but is withheld from subscribing to it because of the absence of individual liberty and democratic ideas. England presents to him a system which keeps fairly balanced both phases of education, even if the system is not always efficient. It is true that the immense chasm which intervenes between the school and the central government sometimes alarms the champion of unitary and perfectly adjusted systems of education, but that chasm ought not to appall the American educator who could not discover the first joint of connection in any system of education in his own country. Under the English system, at any rate, the ten subjects required by the central government are taught in the city schools, while there is no guarantee that the same subjects will be taught in any two American cities.

Since, however, there is left to the individual schools in England, as has been shown, a large privilege of choice in the subjects of instruction other than the ten "prescribed," a further study is necessary before we can arrive at the importance attached to the various subjects by the English people. What this relative importance of subjects is held to be among other progressive nations is an assistance to us in determining their importance for ourselves. For in proportion as two nations have similar elements in that environment to which they must adjust the child, in just such proportion will they both value those subjects of instruction which have proven

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the most effective agents of that adjustment. There are perhaps few elements in the industrial life of England which are not equally important in the industrial life of America, and few elements in the moral, religious and physical environment which are not duplicated in America. And it is to those relatively simple elements in his environment, so similar in both countries, that it is the function of the public elementary school to adjust the child.

Our largest task in this entire study is to determine the theoretical and the actual relative importance attached by a government and by the democratic masses to a specific subject of instruction. We shall, therefore, first present a table (XXIV.) showing the number of departments (schools) in the English elementary school system (age of children, seven to fourteen) which receive the grant from the State treasury for teaching any of the thirty-six respective subjects prescribed upon the "required," the "elective" and the "extra grant" list of the Board of Education.* In England there may be three departments in the same building, viz., Boys', Girls', and Infants' Departments. In 1903 there were 4,002 Boys' Departments, 3,883 Girls', 15,466 Mixed and 8,197 Infants' Departments. There were then in the year under consideration, 23,351 departments in the elementary schools (children seven to fourteen years old).

The figures in Table XXIV. show the numbers of departments in which a given subject is taught. A score of 23,351 to a subject indicates a perfect correlation between the curriculum of the individual school and that prescribed by the Board of Education. The figures should show the relative compliance to the will of the Board of Education as expressed in its list of "required," "elective" and "extra" subjects. The table is divided into these three divisions: subjects numbered

*The terms "elective" and "extra" are used to describe the second and third lists above, respectively.

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TABLE XXIV.—Showing the Number of Departments (Boys, Girls, or Mixed Schools) out of 23,351 under the Control of the English Board of Education, in which the Various Subjects of Instruction are taught.*

| | Number of Departments in which Taught. |
|--|--|
| Subjects Required for the Grant from the State Treasury. | |
| 1 Reading, Writing, Arithmetic | 23,351 |
| 2 Composition | 23,347 |
| 3 Grammar | 23,307 |
| 4 Geography | 23,340 |
| 5 History | 23,231 |
| 6 Common Things | 23,340 |
| 7 Drawing | 20,177 |
| 8 Needle-work | 19,369 |
| 9 Physical Training | 23,328 |
| 10 Singing | 23,348 |
| List from which Schools may elect One or More Subjects. | |
| 11 Algebra | 1,383 |
| 12 Euclid | 198 |
| 13 Mensuration | 349 |
| 14 Mechanics | 263 |
| 15 Science (Elementary or Experimental Physics, Chemistry, etc.) | 596 |
| 16 Animal Physiology | 252 |
| 17 Hygiene | 51 |
| 18 Botany or Horticulture | 157 |
| 19 Principles of Agriculture | 59 |
| 20 Latin | 26 |
| 21 French | 742 |
| 22 German | 15 |
| 23 Welsh | 131 |
| 24 Hebrew | 2 |
| 25 Bookkeeping | 164 |
| 26 Shorthand | 538 |
| 27 Typewriting or Business Subjects | 21 |
| 28 Domestic Economy or Domestic Science | 974 |
| 29 Kindergarten Subjects | 15 |
| Subjects for which Extra Grants are paid. | |
| 30 Cookery (for Girls) | 3,810 |
| 31 Laundry Work | 817 |
| 32 Dairy Work | 1 |
| 33 Household Management | 210 |
| 34 Cottage Gardening (for Boys) | 481 |
| 35 Manual Instruction | 1,907 |
| 36 Cookery (for Boys in Seaport Towns) | 8 |

*This table is taken from Board of Education Statistics ending August 31, 1903, page 101.

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1-10 are the required subjects; 11-29 are the subjects from which one or more subjects may be elected "when the circumstances of the School make it desirable *in the opinion of the Inspector*;" while departments teaching 30-36 receive an extra bonus from the State treasury.

These figures should also show the relative importance attached to a subject when corroborated by Tables XXV. and XXXV. This particular table is not conclusive but only suggestive upon the subject of relative importance of subject matter, first, for the reason that it is most likely much biased in the preference shown for those subjects which have a monetary value because of their ability to draw the parliamentary grant; and, second, for the reason that no idea of the time devoted to a subject is presented. But so far as it may be accepted, it shows that the "three R's" occupy positions of first importance. Next stands composition, then singing, geography and nature study, physical training, history, grammar, drawing and needlework, in the order named. This completes the list of required subjects.

By subtracting the sum of the differences between the scores attained by the nine subjects, which were below the perfect correlation, from the highest possible number (23,351) attained by one subject, there would remain 6,266 schools not scored in the *required list*. Just about this number of schools are scored in the second list from which the one or two electives are to be chosen. This may be readily seen by adding the scores of the subjects of instruction numbered 11 to 29, inclusive. From this it would appear that a subject is dropped from the required list when one from the elective list is chosen. As to the question of the compliance made by the local School Managers and Headmasters to the more strictly mandatory curriculum including the first twelve subjects in Table XXIV., it can be said that if the Board had said emphatically, "Each school receiving the grant *shall* teach each

of these twelve subjects," only 6,266 exceptions would have occurred in a possibility of 233,510. This indicates a very close correlation between the subjects on the list prescribed by the central authority and that prescribed by the local school authorities.

Of the "extra grant" subjects not more than one for every three schools is the average chosen. The eight subjects out of twenty-six possible electives which receive a score as high as five hundred in the two latter sections of this table are algebra, science, French, shorthand, domestic economy, cookery, laundry and manual training. The last six emphasize the utilitarian, the first two the formal.

Here then, we begin to get a glimpse of the emphasis placed upon subjects by the English people in real practice. These data suggest that the purely scientific and the purely practical are uppermost in the English mind in the elementary schools. The public has decided that the formal and the useful shall predominate in the education of the masses in England. What we please to call the art side of the curriculum, i.e., good literature, art in its various forms, are the subjects that suffer if there be omissions. In the required list, literature is not provided for, and the subjects drawing and needlework, which are omitted from the largest number of schools, are the only two in the list which might be said to offer art training. In the other two lists, the different forms of handwork which might be enumerated as subsidiary to the art studies, are provided for in only five or six per cent of the schools. The formal, the scientific, the utilitarian, the practical, are regarded as important, while that which responds to the emotional and the artistic needs of the child and of the race are not emphasized in these elementary schools as a whole.

Many American teachers may observe with delight that the incubus of their existence, spelling, is omitted from the lists entirely. This means that no theoretic importance is attached

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to it. However, an examination of Table XXV., or any of the following tables, will show that it does possess an actual importance among the schoolmasters, and sometimes among the Inspectors. The high score of spelling in Table XXV. is correlated from reading lessons, dictation, etc. In this sense it appears quite as important as does the subject recitation which is on the Board's grant list. Actually, there are thirteen out of thirty-eight schools in Table XXV. which provide for the subject of spelling as a recitation apart. It is interesting that teachers of the English language, when an opportunity is given to omit spelling, do not accept the offer. One wonders if many of the tirades against spelling are really sincere.

So far this section of the discussion has been devoted to the enumeration of the subjects required and suggested by the central authority and the number of individual schools adopting them. We find that the English curriculum contains the same subjects as those prescribed for the German Volksschule, but that, unlike that system, the time and grade in which the subject is taught is not prescribed. A knowledge of these two facts is necessary for a successful comparative study. Our only approach to a correct estimate of the relative values of our own system and that of England, then, is through a comparison of the length of time spent in school by the children of the two countries.

3. Comparison of the English Standard and the American Grade.

The English standards and our grades are usually spoken of as equivalent. Let us see if this be true. In England children enter the Infant School (Department, or Class, according to the several terms) between the ages of three and seven years. Thus, before entering the first standard (grade) the child may have had four years' training and *must* have

had at least two, in compliance with the law compelling attendance between the ages of five and fourteen years. He has spent approximately four hours and a half per day in the school room during these years. The English child enters the first standard at the age of seven with at least two years of training; the American child enters the first grade at the age of six, but has rarely received any training before that time.

In England, the school year is never less than two hundred days; in America, its average length is one hundred forty-three and two-tenths days, possibly one hundred and seventy-five days for cities. The school day in England is apportioned about as follows: two hours at noon, fifteen minutes morning and ten minutes afternoon recess, the session opening at 9 A. M. and closing at 4:30 P. M., which gives five hours per day, —about thirty minutes more than the American child has in the school room or in recitation. (Compare American time allotment Tables II.-XI. with the school periods for the seventy-eight English schools herein studied.) However, we should not forget that in England the seventh and eighth standards are not well attended, owing to the exemptions (p. 66) already mentioned.*

Of the real knowledge of the child at the completion of his fourteenth year, it is difficult to speak, as that must depend in a large degree upon the efficiency and methods of the teacher.

A summary of the content of the Infant School curriculum is given below, and for a comparison of the remainder of the school course examine Tables XIV.-XVIII. and Tables XXXIX.-XLI. The summary is taken from the Infant Department of the Addison Garden School, London.

*Statistics of Board of Education for 1904, p. 6.

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| Subject. | Average Number of Minutes per Week. | Subject. | Average Number of Minutes per Week. |
|-------------------------------|--|--------------------------|--|
| Scripture | 125 | Physical Exercise | 56 |
| Reading | 207 | Singing | 56 |
| Writing | 120 | Stories | 26 |
| Arithmetic | 150 | Recreation | 125 |
| Drawing | 52 | Memory Gems | 52 |
| Needlework | 90 | Object Lessons | 60 |
| Kindergarten Occupations | 109 | Kindergarten Games | 22 |
| Mental Arithmetic | 45 | Optional Lessons | 22 |

The pupil, upon leaving the Infant Section at the age of seven for the first grade of the Elementary School, is supposed to have read through three readers; is able to write both small and capital letters and copy words and sentences; can do simple sums involving notation up to fifty in addition, subtraction, multiplication and division, and knows the multiplication table up to six times six; has had some work in clay modeling, sewing and paper folding, and has learned many songs and something of the elements of singing.

From Tables XIV.-XVIII. and XXXIX.-XLIII. it will be seen that in arithmetic, science and formal grammar the English sixth grade pupil has covered considerably more ground than the American; but in nature study, literature, geography and history he is not at all in advance.

It is not true then, that in all respects, the standard of English schools and the grade of American schools are similar. The pupil in an English standard is somewhat farther advanced, is one year older, has had at least two years more training, and recites a longer period of time during the year than the pupil of the American grade of the same rank.

4. *General Treatment of Subjects by Standards.*

We may advance the discussion of the relative values of the subject matter of the curriculum by a study of Table XXV. This table was made up from a study of thirty-eight curricula of English schools, thirty of which contained first stand-

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ards; thirty-seven, second standards; thirty-eight, third, fourth, fifth and sixth standards; thirty, seventh standards, and four, eighth standards. The figures in the table represent the number of schools teaching the respective subjects in the grade in which the score is written.

This table should answer three questions: First, do the individual schools conform to the prescribed curriculum of the Board of Education? Second, in what grades do the several subjects of instruction occur? Third, how important are the different subjects as measured by the number of grades in which they are taught and by the number of schools which prescribe them?

TABLE XXV.—Showing the Number of English Schools (of the thirty-eight Schools selected) and the Grades (Standards) in which the Various Subjects are taught.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|---|----|-----|------|-----|----|-----|------|-------|
| 1 Scripture | 22 | 28 | 30 | 33 | 34 | 33 | 28 | 3 |
| 2 Reading | 28 | 34 | 36 | 37 | 38 | 38 | 30 | 3 |
| 3 Writing | 28 | 33 | 35 | 36 | 36 | 37 | 27 | 3 |
| 4 Spelling | 21 | 24 | 26 | 26 | 20 | 18 | 10 | 1 |
| 5 Grammar | 20 | 27 | 31 | 32 | 33 | 34 | 29 | 2 |
| 6 Recitation | 19 | 22 | 23 | 24 | 24 | 23 | 19 | 3 |
| Literature | 5 | 5 | 6 | 6 | 6 | 6 | 5 | |
| 7 Composition | 19 | 26 | 27 | 28 | 31 | 31 | 21 | 3 |
| 8 Arithmetic | 27 | 34 | 34 | 36 | 38 | 38 | 30 | 3 |
| Algebra | | | | 2 | 9 | 13 | 11 | 1 |
| Mensuration | | | | 2 | 2 | 3 | 1 | |
| 9 Geography | 24 | 30 | 33 | 34 | 35 | 34 | 27 | 3 |
| 10 History | 7 | 12 | 15 | 21 | 25 | 23 | 17 | 2 |
| 13 Elementary Science or Common Things | 27 | 31 | 33 | 32 | 32 | 35 | 27 | 1 |
| 16 Physical Training | 23 | 30 | 32 | 33 | 35 | 35 | 29 | 1 |
| Swimming | 3 | 3 | 3 | 3 | 5 | 4 | 4 | |
| 17 Drawing | 26 | 32 | 34 | 36 | 36 | 38 | 28 | 3 |
| 18 Singing | 23 | 30 | 32 | 37 | 38 | 34 | 27 | 3 |
| 19 Manual Training | 1 | 1 | 2 | 2 | 12 | 15 | 15 | 2 |
| 20 Needle-work | 13 | 19 | 19 | 20 | 21 | 23 | 19 | 1 |
| Cookery | 3 | 2 | 3 | 5 | 10 | 12 | 8 | |
| Laundry | | | | | 2 | 2 | 2 | |
| 21 Stenography | | | | | 3 | 6 | 5 | |
| 22 French | | | | 1 | 3 | 9 | 9 | |
| Mechanics | | | | | 2 | 2 | 2 | |
| Recreation | 17 | 21 | 21 | 22 | 22 | 22 | 16 | 2 |
| Review or Revision of Home Work | 5 | 5 | 5 | 5 | 5 | 4 | 4 | |
| General Information | 4 | 4 | 4 | 6 | 7 | 8 | 6 | |
| School Garden | | | | | | 1 | 3 | 1 |
| Euclid | | | | | | | | 1 |

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In answer to the first question, this table shows that the subjects receiving a high score are on the "required list," or, in other words, those having a *money* value. No better example of this can be taken than that of manual training. The Code specifies that the Board shall not give the grant except for children twelve years old and over. Consequently, manual training is found below the fifth grade in only two schools out of the thirty-eight. America and France have demonstrated that the teaching of this subject has just as valuable results in the primary grades. The English have abandoned recently the system of issuing the grants according to the examinations passed by the pupils, but they still have considerable reform to work before the curriculum, which theoretically offers such splendid opportunities for electives, can possess in this respect more than a hypothetical worth.

As to the grades in which the subjects are taught, the tendency seems to be to follow among the required studies the German plan which requires that a subject once introduced shall continue with no decrease of time allotment to the end of the course. However, the scores indicate that there is one grade which could be called the center towards which the subjects seem to gravitate. Subjects regarded as of preëminent importance, such as religion and the "three R's," of course, appear equally popular in each grade.

READING possesses the peculiarity in England of being more popular as it advances towards the higher grades. This is due to the fact that much history, geography, science and literature is taught in the special readers.

The tendency towards an emphasis on formal studies and also the practice of grafting high school subjects on to the elementary curriculum without adequate preparation are illustrated in the case of GRAMMAR and ALGEBRA. Instruction in grammar begins in the second grade, a practice found nowhere else in this investigation.

The high scores of GEOGRAPHY in the earlier grades indicate prominent attention to home geography. The grades round which it tends to center are the fourth, fifth and sixth.

The scores occurring in the columns for HISTORY and for LITERATURE are indicative of the comparatively slight importance attached to these subjects. To one educated in American schools neither of them seems to receive its just due. History does not come to its greatest prominence until the fourth grade is reached; while literature, when taught, is about as prominent in one grade as another,—a practice novel to the American school teacher.

The subject most frequently taught in the English schools to children from the age of three to fourteen is SINGING. It does not exceed the “three R’s” in quantity of time, but it excels all others in distribution. In the Statistics of the Board of Education for 1904, p. 10, it is stated that the number of departments both for older and for infant children amounts to 31,548 for all England. In only five of these is singing not taught. Has the American educational public as great an appreciation of this subject? Certainly in America the subject fails to be taught in twenty schools out of every hundred.

Thus far the attempt has been to show from Table XXV. that there is complete adherence to the prescribed course of study in England so far as the required list is concerned. The “elective” list and the “extra grant” lists are not receiving prominent attention in England. We have tried to show the probable grade toward which subjects tend. We have also tried to show the relative importance attached to certain subjects, so far as Table XXV. would indicate. The conclusions were fairly definite as to singing, algebra, literature, history, manual training and grammar. In order to substantiate these conclusions, and to arrive at definite results with reference to the other subjects of instruction, it will be necessary to study

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the time allotments in the elementary schools. This shall be our next task.

5. *Time Allotments of the Various Subjects, with Special Attention to Instruction in Religion, Handwork and Physical Culture.*

Tables XXVI.-XXXV., inclusive, were made from twenty-two curricula representing ten cities whose aggregate population is over six millions. For three of the cities, London, Manchester and Bolton, it seemed advisable to average five time-tables each, making a composite which more nearly represented the city than would any individual school curriculum. Each school, and not each city system, is the unit in England. For this reason, the schools of a large city show as great a variation in time allotment as two different cities, and sometimes greater. The English excel all other nations in adjusting the curriculum to the needs of the individual environment, within certain prescribed limits.

A low time allotment to a subject in a table made up of several different schools would indicate possibly the absence of that subject upon one of the programs, or it might mean an insignificant amount of time spent upon it in several of the schools. In either case the relative unimportance is probably suggested by the environment.

The ten cities furnishing the material for this study were London, Manchester, West Ham, Norwich, Carlisle, West Hartlepool, Wellingborough, Bolton, Castleford and Newcastle. Two of them possess over a million people, three over one hundred thousand, two approximately fifty thousand and three range between fifteen and twenty thousand. The distribution includes approximately all sections of England, representing eight counties. In each case the curriculum has been passed upon by H. M. Inspector. In many cases the Inspector himself collected the syllabi. In nearly every case

the environment was analyzed to show the economic, industrial and social life from which the pupils came. The attendance and the staff of the school were also given. An adequate basis for the selection of representative curricula was thus furnished. The attempt was to include all the representative elements of English life found in the public elementary schools. Factory districts, crowded city tenement districts, residential suburbs, coastal towns, mining sections, and wealthy neighborhoods are all represented.

Each table is supposed to show five facts about the elementary curriculum of that city: first, the subjects taught; second, the grades in which they are taught; third, the number of minutes per week given to each subject in each grade; fourth, the percentage of total weekly recitation time devoted to the respective subjects in each grade; fifth, the percentage of total time devoted to each subject in the entire school life of the child.

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TABLE XXVI.—Minutes of Recitation Time per week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of London, England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|----------------------|------|------|------|------|------|------|------|-------|--------|
| 1 Scripture | 155 | 158 | 160 | 153 | 160 | 155 | 162 | 162 | 11.8 |
| 2 Reading | 180 | 191 | 188 | 175 | 159 | 125 | 121 | 82 | 11.4 |
| 3 Writing | 78 | 89 | 88 | 68 | 62 | 94 | 101 | 70 | 6 |
| 4 Spelling | | 29 | 28 | 20 | 23 | 19 | 20 | 10 | 1.38 |
| 5 Grammar | 55 | 62 | 61 | 53 | 56 | 70 | 105 | 180 | 5.54 |
| 6 Literature | 34 | 40 | 43 | 40 | 41 | 25 | 44 | 90 | 3.34 |
| 7 Composition | 62 | 56 | 87 | 68 | 41 | 38 | 34 | 50 | 4 |
| 8 Arithmetic | 248 | 234 | 237 | 242 | 207 | 161 | 204 | 162 | 15.8 |
| Algebra | | | | 6 | 32 | 48 | 82 | 173 | 3.19 |
| 9 Geography | 38 | 64 | 90 | 94 | 70 | 65 | 72 | 85 | 6.34 |
| 10 History | 83 | 41 | 66 | 50 | 50 | 54 | 55 | 70 | 4.4 |
| 12 Object Lessons | 73 | 75 | 56 | 51 | 39 | 41 | 45 | 80 | 4.3 |
| 16 Physical Training | 50 | 49 | 56 | 48 | 50 | 52 | 65 | 60 | 4 |
| Swimming | | | | | 8 | 8 | 10 | | (0) |
| 17 Drawing | 132 | 105 | 100 | 106 | 111 | 130 | 146 | 202 | 9.65 |
| 18 Singing | 50 | 57 | 51 | 60 | 47 | 47 | 56 | 70 | 4 |
| 19 Wood-work | | 40 | 40 | 47 | 70 | 87 | | | 2.47 |
| 20 Needle-work* | (52) | (52) | (72) | (72) | (84) | (78) | (97) | (75) | (5.44) |
| 23 French | 25 | 24 | 12 | 13 | 12 | 45 | 50 | 72 | 2.37 |
| Exam. of Home-work | | | | | 10 | 10 | 13 | | |
| Total | 1263 | 1314 | 1361 | 1294 | 1248 | 1254 | 1385 | 1568 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|------|
| 1 Scripture | 12.3 | 12.1 | 12 | 11.9 | 12.8 | 12.4 | 11.8 | 10.3 |
| 2 Reading | 14.3 | 14.6 | 13.8 | 13.6 | 12.8 | 10 | 8.8 | 5.2 |
| 3 Writing | 6.2 | 6.8 | 6.5 | 5.3 | 5 | 7.5 | 7.5 | 4.5 |
| 4 Spelling | | 2.2 | 2 | 1.6 | 1.9 | 1.5 | 1.5 | .7 |
| 5 Grammar | 4.4 | 4.8 | 4.5 | 4.1 | 4.5 | 5.6 | 7.6 | 8.3 |
| 6 Literature | 2.7 | 3.1 | 3.2 | 3.1 | 3.3 | 2 | 3.2 | 5.7 |
| 7 Composition | 5 | 4.3 | 6.4 | 5.3 | 3.3 | 3.31 | 2.5 | 3.2 |
| 8 Arithmetic | 19.7 | 18 | 17.4 | 18.8 | 16.6 | 12.9 | 14.8 | 10.3 |
| Algebra | | | | .5 | 2.6 | 3.9 | 6 | 11 |
| 9 Geography | 3 | 4.9 | 6.6 | 7.3 | 5.6 | 5.2 | 5.3 | 5.4 |
| 10 History | 6.6 | 3.2 | 4.9 | 3.9 | 4 | 4.3 | 4 | 4.5 |
| 12 Object Lessons | 5.8 | 5.8 | 4.1 | 3.9 | 3.1 | 3.3 | 3.3 | 5.1 |
| 16 Physical Training | 4 | 3.8 | 4.1 | 3.9 | 4.7 | 4.9 | 5.5 | 3.8 |
| 17 Drawing | 10.5 | 8 | 7.4 | 8.2 | 8.9 | 10.3 | 10.6 | 12.9 |
| 18 Singing | 4 | 4.4 | 3.8 | 4.7 | 3.8 | 3.8 | 4.1 | 4.5 |

*Figures enclosed within parenthesis in any table in this book indicate that the figures are to apply to recitation time for girls only. A cipher included within parenthesis is to indicate that the assignment does not apply to recitation for girls. Manifestly the figures in parentheses should not be counted in averaging the percentages of total time, as these figures are already counted in duplicate time assignments of recitations for boys.

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TABLE XXVII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Manchester, England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | Pct. |
|----------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|
| 1 Scripture | 280 | 280 | 280 | 280 | 280 | 280 | 280 | 18.9 |
| 2 Reading | 192 | 178 | 177 | 148 | 153 | 111 | 103 | 11 |
| 3 Writing | 120 | 119 | 111 | 91 | 48 | 45 | 38 | 5.9 |
| 4 Spelling | 44 | 65 | 54 | 57 | 32 | 20 | 35 | 3.1 |
| 5 Grammar | 65 | 73 | 77 | 77 | 87 | 98 | 99 | 5.9 |
| 6 Literature | 42 | 41 | 28 | 28 | 32 | 39 | 32 | 2.5 |
| 7 Composition | | | 10 | 33 | 68 | 70 | 68 | 2.6 |
| 8 Arithmetic | 259 | 242 | 235 | 239 | 205 | 223 | 205 | 16.6 |
| Algebra | | | | 42 | 70 | 68 | 80 | 2.7 |
| 9 Geography | 50 | 54 | 99 | 109 | 110 | 110 | 110 | 6.6 |
| 10 History | 7 | 7 | 7 | 7 | 7 | 7 | 9 | |
| 12 Object Lessons | 70 | 72 | 26 | 26 | 26 | 26 | 26 | 2.8 |
| 13 Mensuration (b) | | | | | 12 | 12 | | |
| 16 Physical Training | 62 | 61 | 62 | 62 | 62 | 63 | 64 | 4.5 |
| Swimming | Once a week in some schools. | | | | | | | |
| 17 Drawing | 98 | 98 | 104 | 110 | 108 | 120 | 124 | 7.9 |
| 18 Singing | 66 | 64 | 64 | 60 | 60 | 62 | 58 | 4.5 |
| 19 Wood-work | | | | | 100 | 96 | 98 | 3 |
| 20 Needle-work | (120) | (120) | (120) | (120) | (120) | (120) | (120) | (8.7) |
| 23 French | | | | | 18 | 22 | 22 | |
| Total | 1333 | 1334 | 1314 | 1349 | 1439 | 1450 | 1441 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|--|
| 1 Scripture | 19.6 | 19.6 | 19.9 | 19.3 | 18.1 | 18 | 18.1 | |
| 2 Reading | 14.5 | 13.4 | 13.5 | 11 | 10.6 | 7.7 | 7.2 | |
| 3 Writing | 9 | 9 | 8.5 | 6.8 | 3.2 | 3.1 | 2.7 | |
| 4 Spelling | 3.3 | 4.9 | 4.1 | 4.2 | 2.2 | 1.4 | 2.4 | |
| 5 Grammar | 4.9 | 5.5 | 5.9 | 5.7 | 6.1 | 6.6 | 6.9 | |
| 6 Literature | 3.2 | 3.2 | 2.2 | 2.1 | 2.2 | 2.7 | 2.2 | |
| 7 Composition | | | .9 | 2.5 | 4.7 | 4.8 | 4.7 | |
| 8 Arithmetic | 19.5 | 18.2 | 18 | 17.7 | 14.3 | 15.4 | 14.3 | |
| Algebra | | | | 3.1 | 4.9 | 4.7 | 5.6 | |
| 9 Geography | 3.8 | 3.9 | 7.6 | 8.1 | 7.7 | 7.6 | 7.7 | |
| 10 History | .6 | | | | | | | |
| 12 Object Lessons | 5.3 | 5.4 | 2 | 1.9 | 1.8 | 1.8 | 1.8 | |
| 16 Physical Training | 4.7 | 4.7 | 4.8 | 4.6 | 4.2 | 4.4 | 4.5 | |
| 17 Drawing | 7.2 | 7.3 | 8 | 8.2 | 7.5 | 8.3 | 8.6 | |
| 18 Singing | 5 | 5 | 4.9 | 4.5 | 4.2 | 4.3 | 4 | |
| 19 Wood-work | | | | | 7 | 6.5 | 6.7 | |
| 20 Needle-work | 9 | 9 | 9.2 | 8.9 | 8.4 | 8.3 | 8.4 | |
| 23 French | | | | | 1 | 1.5 | 1.5 | |

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TABLE XXVIII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of West Ham, England.

| Grade | L | II. | III. | IV. | V. | VI. | VII. | Pct. |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1 Scripture | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 12.1 |
| 2 Reading | 210 | 270 | 175 | 175 | 175 | 140 | 105 | 12.4 |
| 3 Writing | 70 | 70 | 35 | 35 | 35 | 35 | 35 | 3.12 |
| 4 Spelling | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 12.1 |
| 5 Grammar | | 35 | 35 | 35 | 35 | 45 | 45 | 2.58 |
| 6 Literature | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 2.78 |
| 7 Composition | | | | | 100 | 100 | 100 | 2 |
| 8 Arithmetic | 325 | 325 | 360 | 360 | 360 | 325 | 360 | 24 |
| Algebra | | | | | | 35 | 35 | .7 |
| 9 Geography | 35 | 70 | 70 | 70 | 70 | 70 | 70 | 4.51 |
| 10 History | | 35 | 35 | 35 | 35 | 35 | 35 | 2.8 |
| 13 Elementary Science | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 2.43 |
| 16 Physical Training | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 2.43 |
| 17 Drawing | 105 | 105 | 75 | 105 | 105 | 105 | 105 | 7 |
| 18 Singing | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 4.86 |
| 19 Wood-work | | | | | 120 | 120 | 120 | 3.57 |
| 20 Needle-work | (165) | (165) | (165) | (165) | (165) | (165) | (165) | (11.4) |
| Occupations | | 40 | 40 | 40 | 40 | 40 | 40 | 2.38 |
| Domestic Economy | 60 | 60 | 60 | 40 | 40 | 40 | 40 | 3.37 |
| Total | 1275 | 1480 | 1355 | 1385 | 1505 | 1580 | 1580 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-----------------------|------|--------|--------|------|--------|--------|--------|--|
| 1 Scripture | 13.8 | 11.8 | 13 | 12.7 | 11.6 | 11.1 | 11.1 | |
| 2 Reading | 16.6 | 18.3 | 13 | 12.7 | 11.6 | 8.9 | 6.7 | |
| 3 Writing | 5.5 | 4.7 | 2.6 | 2.6 | 2.3 | 2.2 | 2.2 | |
| 4 Spelling | 13.8 | 11.8 | 13 | 12.7 | 11.6 | 11.1 | 11.1 | |
| 5 Grammar | 3.2 | 2.3 | 2.6 | 2.6 | 24.1 | 20.8 | 22.8 | |
| 6 Literature | | 2.7 | 3 | 2.8 | 2.6 | 2.5 | 2.5 | |
| 7 Composition | | | | | | 6.3 | 6.3 | |
| 8 Arithmetic | 25.6 | 22 | 26.7 | 26 | 24.1 | 20.6 | 22.8 | |
| 9 Geography | 2.8 | 4.7 | 5.2 | 5 | 4.6 | 4.4 | 4.4 | |
| 10 History | | 2.3 | 2.6 | 2.6 | 2.3 | 2.2 | 2.2 | |
| 13 Elementary Science | 2.8 | 2.3 | 2.6 | 2.6 | 2.3 | 2.2 | 2.2 | |
| 16 Physical Training | 2.8 | 2.3 | 2.6 | 2.6 | 2.3 | 2.2 | 2.2 | |
| 17 Drawing | 8.3 | 7 | 5.6 | 7.6 | 7 | 6.7 | 6.7 | |
| 18 Singing | 5.5 | 4.7 | 5.2 | 5 | 4.6 | 4.4 | 4.4 | |
| 20 Needle-work | (13) | (11.2) | (12.2) | (12) | (11.8) | (10.5) | (10.5) | |
| Occupations | | 2.7 | 3 | 2.8 | 2.6 | 2.5 | 2.5 | |

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TABLE XXIX.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Bolton, England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | Pct. |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1 Scripture | 186 | 197 | 207 | 207 | 207 | 207 | 207 | 13.2 |
| 2 Reading | 210 | 210 | 218 | 190 | 206 | 202 | 167 | 12.9 |
| 3 Writing | 162 | 119 | 168 | 148 | 170 | 170 | 157 | 10.1 |
| 5 Grammar | 57 | 59 | 95 | 92 | 92 | 85 | 92 | 5.25 |
| 6 Literature | 56 | 52 | 39 | 45 | 45 | 45 | 45 | 3 |
| 7 Composition | 28 | 28 | 28 | 28 | 30 | 30 | 30 | 1.78 |
| 8 Arithmetic | 213 | 235 | 227 | 286 | 282 | 299 | 291 | 16.8 |
| Algebra | | | | | 24 | 30 | 66 | 1.11 |
| 9 Geography | 74 | 74 | 86 | 98 | 86 | 88 | 88 | 5.49 |
| 10 History | | 6 | 12 | 35 | 28 | 28 | 28 | 1.26 |
| 11 Object Lessons | | | | | | | | |
| 12 Elementary Science | 71 | 63 | 77 | 50 | 47 | 47 | 47 | 3.64 |
| 13 Nature Study | | | | | | | | |
| 16 Physical Training | 61 | 62 | 62 | 63 | 62 | 62 | 62 | 4 |
| 17 Drawing | 133 | 144 | 136 | 118 | 113 | 113 | 113 | 8 |
| 18 Singing | 57 | 54 | 54 | 50 | 54 | 54 | 55 | 3.47 |
| Paper Folding, etc. | 35 | 35 | 8 | 6 | 6 | 20 | 20 | 1.2 |
| 20 Needle-work | (131) | (131) | (138) | (138) | (138) | (138) | (138) | (8.74) |
| Total | 1482 | 1467 | 1533 | 1552 | 1590 | 1618 | 1606 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-----------------------|-------|------|------|------|-------|-------|-------|--|
| 1 Scripture | 13.3 | 13.5 | 13.4 | 13.4 | 13 | 12.8 | 12.8 | |
| 2 Reading | 14.2 | 14.4 | 14.1 | 12.3 | 13 | 12.5 | 10.3 | |
| 3 Writing | 11 | 8.2 | 10.9 | 9.6 | 10.7 | 10.5 | 9.7 | |
| 5 Grammar | 3.8 | 4.1 | 6.1 | 6 | 5.8 | 5.3 | 5.7 | |
| 6 Literature | 3.8 | 3.6 | 2.5 | 3 | 2.8 | 2.8 | 2.8 | |
| 7 Composition | 1.8 | 1.8 | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | |
| 8 Arithmetic | 14.4 | 16.1 | 14.7 | 18.5 | 17.7 | 18.5 | 18 | |
| Algebra | | | | | 1.5 | 1.9 | 4.1 | |
| 9 Geography | 5 | 5.1 | 5.6 | 6.3 | 5.4 | 5.4 | 5.4 | |
| 10 History | | .8 | .8 | 2.3 | 1.8 | 1.7 | 1.7 | |
| 11 Object Lessons | | | | | | | | |
| 12 Elementary Science | 4.8 | 4.3 | 5 | 3.3 | 2.9 | 3 | 3 | |
| 13 Nature Study | | | | | | | | |
| 16 Physical Training | 4.1 | 4.2 | 4 | 4 | 3.9 | 3.8 | 3.8 | |
| 17 Drawing | 9 | 9.9 | 8.8 | 7.6 | 7.1 | 7 | 7 | |
| 18 Singing | 3.9 | 3.7 | 3.5 | 3.3 | 3.4 | 3.3 | 3.4 | |
| 19 Wood-work | 2.4 | 2.4 | .5 | .5 | .5 | 1.2 | 1.2 | |
| 20 Needle-work | (8.9) | (9) | (9) | (9) | (8.7) | (8.5) | (8.5) | |

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TABLE XXX.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Norwich, England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | Pct. |
|-----------------------|------|------|------|------|------|------|------|------|
| 1 Scripture | 175 | 175 | 175 | 175 | 175 | 145 | 145 | 10.5 |
| 2 Reading | 240 | 240 | 160 | 160 | 80 | 40 | 80 | 9.5 |
| 3 Writing | 160 | 40 | 40 | 40 | 40 | 40 | 40 | 3.64 |
| 4 Spelling | 80 | 90 | 120 | 115 | 120 | 105 | 100 | 6.21 |
| 5 Grammar | 90 | 60 | 60 | 60 | 60 | 60 | 60 | 4.15 |
| 6 Literature | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 2.58 |
| 7 Composition | 170 | 265 | 265 | 230 | 200 | 235 | 200 | 14.3 |
| 8 Arithmetic | 240 | 240 | 200 | 240 | 240 | 240 | 200 | 15. |
| 9 Geography | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 5.11 |
| 10 History | 40 | 40 | 40 | 40 | 40 | 40 | 80 | 2.92 |
| 12 Object Lessons | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 2.6 |
| 13 Elementary Science | | | | | | | | |
| 16 Physical Training | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 3.3 |
| 17 Drawing | 120 | 120 | 160 | 160 | 160 | 160 | 120 | 9 |
| 18 Singing | 40 | 40 | 40 | 40 | 80 | 80 | 80 | 4 |
| 19 Manual Training | 40 | 40 | 40 | 40 | 40 | 150 | 150 | 4.6 |
| Exam. of Home-work | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 3.25 |
| Total | 1615 | 1620 | 1570 | 1570 | 1545 | 1555 | 1525 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|--|
| 1 Scripture | 10.8 | 10.8 | 11.2 | 11.2 | 11.3 | 9.4 | 9.4 | |
| 2 Reading | 14.8 | 14.8 | 10.2 | 10.2 | 5.2 | 2.6 | 5.2 | |
| 3 Writing | 9.9 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | |
| 4 Spelling | 1.9 | 5.6 | 7.7 | 7.3 | 7.8 | 6.8 | 6.8 | |
| 5 Grammar | 5.6 | 3.7 | 3.8 | 3.8 | 3.9 | 3.9 | 3.2 | |
| 6 Literature | 2.5 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | |
| 7 Composition | 10.5 | 16.4 | 16.9 | 14.7 | 13 | 15.2 | 13.1 | |
| 8 Arithmetic | 14.8 | 14.8 | 12.8 | 15.3 | 15.6 | 15.5 | 13.1 | |
| 9 Geography | 5 | 5 | 5.1 | 5.1 | 5.2 | 5.2 | 5.2 | |
| 10 History | 2.5 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 5.2 | |
| 12 Object Lessons | 2.5 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | |
| 13 Elementary Science | | | | | | | | |
| 16 Physical Training | 3.7 | 3.7 | 3.8 | 3.8 | 3.9 | 3.9 | 4 | |
| 17 Drawing | 7.4 | 7.4 | 10.2 | 10.2 | 10.2 | 10.2 | 7.9 | |
| 18 Singing | 2.5 | 2.5 | 2.6 | 2.6 | 5.2 | 5.2 | 5.2 | |
| 19 Wood-work | 2.5 | 2.5 | 2.6 | 2.6 | 2.6 | 9.7 | 9.8 | |
| Exam. of Home-work | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | 3.2 | 3.3 | |

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TABLE XXXI.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Carlisle, England.

| Grade | I. | II. | III. | IV. | V. | VI. | Pct. |
|----------------------|------|------|------|------|------|------|------|
| 1 Scripture | 35 | 35 | 35 | 35 | 35 | 35 | 2.54 |
| 2 Reading | 220 | 220 | 195 | 150 | 150 | 150 | 13.1 |
| 3 Writing | 100 | 100 | 100 | 55 | 55 | 55 | 5.61 |
| 4 Spelling | 135 | 135 | 135 | 135 | | | 6.51 |
| 5 Grammar | 55 | 55 | 55 | 95 | 90 | 90 | 5.31 |
| 6 Literature | 75 | 75 | 75 | 75 | 75 | 75 | 5.43 |
| 7 Composition | 55 | 55 | 55 | 50 | 190 | 190 | 7.17 |
| 8 Arithmetic | 250 | 250 | 250 | 420 | 385 | 425 | 23.9 |
| 9 Geography | 80 | 80 | 80 | 80 | 80 | 80 | 5.79 |
| 10 History | 80 | 80 | 80 | 55 | 55 | 55 | 4.88 |
| 16 Physical Training | 100 | 100 | 120 | 80 | 70 | 80 | 5.43 |
| 17 Drawing | 125 | 125 | 125 | 125 | 125 | 125 | 9. |
| 18 Singing | 75 | 75 | 75 | 75 | 75 | 75 | 5.43 |
| Total | 1385 | 1385 | 1380 | 1380 | 1385 | 1385 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | |
|----------------------|------|------|------|------|------|------|--|
| 1 Scripture | 26 | 26 | 26 | 26 | 26 | 26 | |
| 2 Reading | 16 | 16 | 14.2 | 10.9 | 10.9 | 10.9 | |
| 3 Writing | 7.3 | 7.3 | 7.3 | 4 | 4 | 4 | |
| 4 Spelling | 9.8 | 9.8 | 9.8 | 9.8 | | | |
| 5 Grammar | 4 | 4 | 4 | 6.9 | 6.5 | 6.4 | |
| 6 Literature | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | |
| 7 Composition | 4 | 4 | 4 | 3.6 | 13.8 | 13.8 | |
| 8 Arithmetic | 18.1 | 18.1 | 18.1 | 30 | 27.9 | 30 | |
| 9 Geography | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | |
| 10 History | 5.8 | 5.8 | 5.8 | 4 | 4 | 4 | |
| 16 Physical Training | 7.3 | 7.3 | 8.7 | 2.2 | 5.1 | 2.2 | |
| 17 Drawing | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | |
| 18 Singing | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | |

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TABLE XXXII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of West Hartlepool, England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1 Scripture | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 11.7 |
| 2 Reading | 175 | 175 | 170 | 90 | 90 | 70 | 70 | 70 | 10.7 |
| 3 Writing | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 6.8 |
| 6 Literature | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 9.4 |
| 8 Arithmetic | 240 | 240 | 300 | 300 | 300 | 300 | 280 | 280 | 26.3 |
| Algebra | | | | | | 100 | 100 | 100 | 3.5 |
| 10 History | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 4.2 |
| 13 Elementary Science | 100 | 100 | 100 | 100 | 105 | 105 | 105 | 105 | 9.6 |
| 17 Drawing | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 11.3 |
| 18 Singing | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 6.6 |
| 19 Needle-work | (240) | (240) | (240) | (240) | (240) | (240) | (240) | (240) | (22.6) |
| Total | 1045 | 1045 | 1100 | 1030 | 1025 | 1105 | 1085 | 1085 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|--|
| 1 Scripture | 12.1 | 12.1 | 11.3 | 12.3 | 12.3 | 11.3 | 11.6 | 11.6 | |
| 2 Reading | 16.9 | 16.9 | 15.4 | 8.9 | 8.9 | 6.3 | 6.5 | 6.5 | |
| 3 Writing | 6.8 | 6.8 | 6.3 | 6.9 | 6.9 | 6.3 | 6.5 | 6.5 | |
| 6 Literature | 9.7 | 9.7 | 9 | 9.9 | 9.9 | 9 | 9.3 | 9.3 | |
| 8 Arithmetic | 23.1 | 23.1 | 27.1 | 29.3 | 29.5 | 27.1 | 26 | 26 | |
| Algebra | | | | | | 9 | 9.3 | 9.3 | |
| 10 History | 4.4 | 4.4 | 4.1 | 4.5 | 4.5 | 4.1 | 4.2 | 4.2 | |
| 13 Elementary Science | 9.7 | 9.7 | 9 | 9.9 | 10.3 | 9.5 | 9.8 | 9.8 | |
| 17 Drawing | 11.6 | 11.6 | 10.9 | 11.8 | 11.8 | 10.9 | 11.2 | 11.2 | |
| 18 Singing | 6.8 | 6.8 | 6.3 | 6.9 | 6.9 | 6.3 | 6.5 | 6.5 | |
| 19 Needle-work | 23.1 | 23.1 | 21.7 | 23.6 | 23.6 | 21.7 | 22.3 | 22.3 | |

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TABLE XXXIII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of New Castle-under-Lyme, England.

| Grade | I. | II. | III. | IV. | V. | VI. | Pct. |
|----------------------|------|------|------|------|------|------|------|
| 1 Scripture | 175 | 175 | 175 | 175 | 175 | 175 | 12 |
| 2 Reading | 255 | 155 | 150 | 150 | 165 | 165 | 11.9 |
| 3 Writing | 235 | 110 | 150 | 190 | 120 | 120 | 10.6 |
| 4 Spelling | 70 | 145 | 70 | | | | 3.3 |
| 5 Grammar | 30 | 80 | 115 | 145 | 135 | 135 | 7.3 |
| 6 Literature | 40 | 30 | 30 | 45 | 45 | 45 | 2.7 |
| 7 Composition | | 75 | 80 | 80 | 85 | 85 | 4.6 |
| 8 Arithmetic | 220 | 230 | 225 | 315 | 315 | 315 | 18.5 |
| 9 Geography | 45 | 80 | 90 | 115 | 115 | 115 | 6.4 |
| 12 Object Lessons | 90 | 80 | 75 | 45 | 45 | 45 | 4.3 |
| 16 Physical Training | 60 | 60 | 60 | 60 | 60 | 60 | 4.1 |
| 17 Drawing | 120 | 120 | 120 | 120 | 120 | 120 | 8.2 |
| 18 Singing | 90 | 90 | 90 | 90 | 90 | 90 | 6.2 |
| Total | 1430 | 1430 | 1430 | 1530 | 1470 | 1470 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | |
|----------------------|------|------|------|------|------|------|--|
| 1 Scripture | 12.3 | 12.3 | 12.3 | 11.5 | 11.9 | 11.9 | |
| 2 Reading | 17.9 | 10.9 | 10.5 | 9.8 | 11.2 | 11.2 | |
| 3 Writing | 16.5 | 7.7 | 10.5 | 12.4 | 8.2 | 8.2 | |
| 4 Spelling | 4.9 | 10.2 | 4.9 | | | | |
| 5 Grammar | 2.1 | 5.6 | 8.1 | 9.5 | 9.2 | 9.2 | |
| 6 Literature | 2 | 2.1 | 2.1 | 2.9 | 3.1 | 3.1 | |
| 7 Composition | | 5.3 | 5.6 | 5.2 | 5.8 | 5.8 | |
| 8 Arithmetic | 15.4 | 16.1 | 15 | 20.6 | 21.4 | 21.4 | |
| 9 Geography | 3.2 | 5.6 | 6.3 | 7.5 | 7.8 | 7.8 | |
| 12 Object Lessons | 6.3 | 5.6 | 5.3 | 2.9 | 3.1 | 3.1 | |
| 16 Physical Training | 4.2 | 4.2 | 4.2 | 3.9 | 4.1 | 4.1 | |
| 17 Drawing | 8.4 | 8.4 | 8.4 | 7.9 | 8.2 | 8.2 | |
| 18 Singing | 6.3 | 6.3 | 6.3 | 5.9 | 6.2 | 6.2 | |

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TABLE XXXIV.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Wellingborough, England.

| Grade | I. | II. | III. | IV. | V. | VI. | Pct. |
|----------------------|-------|-------|-------|-------|-------|-------|--------|
| 1 Scripture | 175 | 175 | 175 | 175 | 175 | 175 | 13.1 |
| 2 Reading | 130 | 130 | 90 | 90 | 90 | 90 | 7.8 |
| 3 Writing | 30 | 30 | 30 | 30 | 30 | 30 | 2.3 |
| 4 Spelling | 30 | 30 | 30 | 30 | 30 | 30 | 2.3 |
| 5 Grammar | 40 | 40 | 40 | 40 | 40 | 40 | 3.1 |
| 6 Literature | 60 | 60 | 60 | 60 | 60 | 60 | 4.5 |
| 7 Composition | 40 | 40 | 40 | 40 | 150 | 150 | 5.8 |
| 8 Arithmetic | 340 | 340 | 340 | 340 | 310 | 310 | 24.8 |
| Algebra | | | | | | 70 | .8 |
| 9 Geography | 80 | 80 | 120 | 120 | 120 | 120 | 8. |
| 10 History | 60 | 60 | 80 | 80 | 80 | 80 | 5.5 |
| 12 Object Lessons | 80 | 80 | 80 | 30 | | | 3.4 |
| 16 Physical Training | 60 | 60 | 60 | 60 | 60 | 60 | 4.5 |
| 17 Drawing | 160 | 160 | 160 | 160 | 160 | 160 | 11.9 |
| 18 Singing | 50 | 50 | 50 | 50 | 50 | 50 | 3.8 |
| 19 Wood-work | | | | | 120 | 120 | 3.1 |
| 20 Needle-work | (160) | (160) | (160) | (160) | (160) | (160) | (11.9) |
| Total | 1335 | 1335 | 1355 | 1305 | 1475 | 1645 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | |
|-----------------------|--------|--------|--------|--------|--------|--------|--|
| 1 Scripture | 13.8 | 13.8 | 13.6 | 14 | 12.3 | 11 | |
| 2 Reading | 10.3 | 10.3 | 7 | 7.2 | 6.4 | 5.7 | |
| 3 Writing | 2.4 | 2.4 | 2.4 | 2.4 | 2.1 | 1.9 | |
| 4 Spelling | 2.4 | 2.4 | 2.4 | 2.4 | 2.1 | 1.9 | |
| 5 Grammar | 3.2 | 3.2 | 3.1 | 3.2 | 2.8 | 2.5 | |
| 6 Literature | 4.8 | 4.8 | 4.7 | 4.8 | 4.2 | 3.8 | |
| 7 Composition | 3.2 | 3.2 | 3.1 | 3.2 | 10.6 | 9.4 | |
| 8 Arithmetic | 26.8 | 26.8 | 26.4 | 27.2 | 21.9 | 19.5 | |
| Algebra | | | | | | 4.4 | |
| 9 Geography | 6.3 | 6.3 | 9.3 | 9.6 | 8.5 | 7.6 | |
| 10 History | 4.8 | 4.8 | 6.2 | 6.4 | 5.7 | 4.4 | |
| 13 Elementary Science | 6.3 | 6.3 | 9.3 | 9.6 | 8.5 | 7.6 | |
| 16 Physical Training | 4.8 | 4.8 | 4.7 | 4.8 | 4.2 | 3.8 | |
| 17 Drawing | 12.6 | 12.6 | 12.4 | 12.8 | 11.3 | 10.1 | |
| 18 Singing | 4 | 4 | 3.9 | 4 | 3.5 | 3.2 | |
| 19 Wood-work | | | | | 8.5 | 7.6 | |
| 20 Needle-work | (12.6) | (12.6) | (12.4) | (12.8) | (11.3) | (10.1) | |

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TABLE XXXV.—Minutes of Recitation Time per week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Castleford, England.

| Grade | I. | II. | III. | IV. | V. | VI. | Pct. |
|-----------------------|------|------|------|------|------|------|--------|
| 1 Scripture | 75 | 75 | 75 | 75 | 75 | 75 | 4.9 |
| 2 Reading | 290 | 290 | 290 | 210 | 240 | 240 | 17.4 |
| 3 Writing | 60 | 60 | 60 | 60 | 60 | 60 | 4 |
| 4 Spelling | 180 | 180 | 120 | 45 | 45 | 45 | 6.9 |
| 5 Grammar | 30 | 30 | 75 | 75 | 75 | 75 | 4 |
| 6 Literature | 30 | 30 | 30 | 60 | 60 | 60 | 3 |
| 7 Composition | 120 | 45 | 45 | 45 | 90 | 90 | 4.8 |
| 8 Arithmetic (Boys) | 335 | 335 | 335 | 335 | 335 | 335 | 22.5 |
| Arithmetic (Girls) | 275 | 275 | 275 | 275 | 275 | 275 | (18.5) |
| 9 Geography | 60 | 60 | 90 | 140 | 140 | 140 | 7 |
| 10 History | | | | 60 | 60 | 60 | 2 |
| 12 Object Lessons | | | | | | | |
| 13 Elementary Science | 60 | 60 | 60 | 60 | 60 | 60 | 4 |
| 16 Physical Training | 60 | 60 | 60 | 60 | 60 | 60 | 4 |
| 17 Drawing | 150 | 150 | 150 | 150 | 150 | 150 | 10 |
| 18 Singing | 75 | 75 | 75 | 75 | 75 | 75 | 4.9 |
| 20 Needle-work | 160 | 160 | 160 | 160 | 160 | 160 | 10.7 |
| Drawing (Girls) | (50) | (50) | (50) | (50) | (50) | (50) | (3.4) |
| Cooking | (80) | (80) | (80) | (80) | (80) | (80) | (5.4) |
| Total | 1525 | 1450 | 1465 | 1450 | 1525 | 1525 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | |
|-----------------------|-------|-------|--------|-------|-------|-------|--|
| 1 Scripture | 5 | 5.2 | 5.2 | 5.2 | 5 | 5 | |
| 2 Reading | 19 | 20 | 19.9 | 14.5 | 15.8 | 15.8 | |
| 3 Writing | 4 | 4.2 | 4.1 | 4.2 | 4 | 4 | |
| 4 Spelling | 11.9 | 12.4 | 8.2 | 3 | 3 | 3 | |
| 5 Grammar | 2 | 2.1 | 5.2 | 5.2 | 5 | 5 | |
| 6 Literature | 2 | 2.1 | 2 | 4.2 | 4 | 4 | |
| 7 Composition | 7.9 | 3 | 3 | 3 | 6 | 6 | |
| 8 Arithmetic (Boys) | 22.1 | 23.2 | 23 | 23.2 | 22.1 | 22.1 | |
| Arithmetic (Girls) | (18) | (19) | (18.9) | (19) | (18) | (18) | |
| 9 Geography | 4 | 4.2 | 6.2 | 9.7 | 9.2 | 9.2 | |
| 10 History | | | | 4.2 | 4 | 4 | |
| 12 Object Lessons | | | | | | | |
| 13 Elementary Science | 4 | 4.2 | 4.1 | 4.2 | 4 | 4 | |
| 16 Physical Training | 4 | 4.2 | 4.1 | 4.2 | 4 | 4 | |
| 17 Drawing | 10 | 10.4 | 10.4 | 10.4 | 10 | 10 | |
| Drawing (Girls) | (3.3) | (3.5) | (3.5) | (3.5) | (3.3) | (3.3) | |
| 18 Singing | 5 | 5.2 | 5.1 | 5.2 | 5 | 5 | |
| 20 Needle-work | 10.5 | 11.1 | 11 | 11.1 | 10.5 | 10.5 | |
| Cooking | 5.2 | 5.2 | 5.4 | 5.5 | 5.2 | 5.2 | |

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These tables should offer evidence corroborative of the facts already brought out in the previous tables. With reference to the distribution of subjects by departments, the evidence offered is at once conclusive. The facts tabulated here, while complementary to the former tables, are yet more definite and more conclusive. For the amount of time spent in teaching a subject is the most prominent factor in the measurement of the importance of that subject. The presence of a subject in several grades, together with a large amount of time devoted to its recitation, especially when found in the more progressive systems, would indicate the ideal towards which the schools on the whole are struggling. We have attempted to secure the more progressive of the curricula of the city schools, knowing that the trend of thought embodied in them probably influences the curricula of other towns.

The reader must be cautioned that the figures given in these columns must of necessity offer only a relative and not an absolute measurement of the national practice. There will be exceptions to all the cases enumerated. However, we think that the evidence points toward a close adherence to what is found in these tables so far as England is in question.

Before entering into the discussion of the content of the subject matter of Tables XXVI.-XXXV., it is necessary to introduce Tables XXXVI. and XXXVII.

PUBLIC ELEMENTARY SCHOOL CURRICULA. 95

TABLE XXXVI.—Showing the Average Recitation Time in Minutes per Week devoted to Each Subject in Each Grade (or Standard) in Ten Cities of England.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 Scripture | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 11.4 |
| 2 Reading | 210 | 206 | 181 | 154 | 140 | 127 | 108 | 76 | 11.1 |
| 3 Writing | 123 | 91 | 85 | 78 | 69 | 62 | 73 | 70 | 6 |
| 4 Spelling | 66 | 85 | 60 | 58 | 43 | 39 | 33 | 5 | 3.57 |
| 5 Grammar | 42 | 49 | 68 | 67 | 67 | 70 | 67 | 65 | 4.5 |
| 6 Recitation or Literature | 52 | 57 | 56 | 53 | 54 | 53 | 50 | 95 | 4.2 |
| 7 Composition | 43 | 52 | 61 | 54 | 85 | 99 | 72 | 25 | 4.5 |
| 8 Arithmetic | 267 | 266 | 276 | 308 | 294 | 293 | 257 | 231 | 20.1 |
| Algebra | 3 | 3 | 3 | 5 | 13 | 35 | 61 | 136 | 2.38 |
| 9 Geography | 53 | 64 | 80 | 91 | 87 | 88 | 70 | 97 | 5.7 |
| 10 History | 32 | 38 | 37 | 42 | 40 | 40 | 34 | 58 | 2.9 |
| 12 Object Lessons | | | | | | | | | |
| 13 Elementary Science | | | | | | | | | |
| 14 Nature Study | 62 | 61 | 55 | 44 | 40 | 41 | 46 | 92 | 4 |
| 16 Physical Training | 48 | 49 | 52 | 42 | 46 | 43 | 29 | 30 | 3.1 |
| 17 Drawing | 115 | 125 | 125 | 127 | 127 | 130 | 121 | 95 | 8.8 |
| 18 Singing | 64 | 64 | 64 | 64 | 67 | 67 | 65 | 70 | 4.8 |
| 19 Wood-work | 8 | 16 | 19 | 18 | 50 | 61 | 71 | | 2.1 |
| 20 Needle-work | (103) | (103) | (106) | (106) | (107) | (106) | (126) | (157) | (3.3) |
| 21 Cooking | (14) | (14) | (14) | (12) | (12) | (12) | (12) | | (.8) |
| 22 French | 4 | 4 | 2 | 2 | 2 | 29 | 36 | 47 | 1.1 |
| Total | 1847 | 1869 | 1861 | 1859 | 1880 | 1433 | 1359 | 1388 | |

Showing the Average Percentage of Recitation Time given to Each Subject in Each Grade in Ten Cities of England.

| | | | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 1 Scripture | 11.5 | 11.3 | 11.5 | 11.5 | 11.3 | 10.9 | 11.5 | 11.7 | |
| 2 Reading | 15.6 | 15.1 | 13.3 | 11.3 | 10.2 | 8.9 | 7.9 | 5.7 | |
| 3 Writing | 8.9 | 6.7 | 6.3 | 5.8 | 4.9 | 4.4 | 5.4 | 5.2 | |
| 4 Spelling | 4.9 | 6.2 | 4.4 | 4.3 | 3.1 | 2.7 | 2.4 | .4 | |
| 5 Grammar | 3.1 | 3.6 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | 4.9 | |
| 6 Recitation or Literature | 3.9 | 3.7 | 3.7 | 3.9 | 3.9 | 3.7 | 3.7 | 7.1 | |
| 7 Composition | 3.2 | 3.8 | 4.5 | 3.9 | 6.2 | 6.9 | 5.3 | 1.9 | |
| 8 Arithmetic | 19.3 | 19.4 | 19.9 | 22.7 | 21.3 | 20.5 | 18.9 | 16.5 | |
| Algebra | .2 | .2 | 1.2 | .4 | .9 | 2.5 | 4.5 | 10.2 | |
| 9 Geography | 3.9 | 4.7 | 5.9 | 6.7 | 6.3 | 6.2 | 5.2 | 9.3 | |
| 10 History | 2.4 | 2.8 | 2.7 | 3.1 | 3.9 | 2.8 | 3.4 | 6.9 | |
| 13 Elementary Science, etc. | 4.6 | 4.5 | 4.1 | 3.3 | 3.9 | 2.8 | 3.4 | 6.9 | |
| 16 Physical Training | 3.6 | 3.6 | 3.8 | 3.1 | 3.4 | 3 | 2.2 | 2.9 | |
| 17 Drawing | 8.5 | 9.1 | 9.2 | 9.4 | 9.2 | 9.1 | 8.9 | 7.1 | |
| 18 Singing | 4.8 | 4.6 | 4.7 | 4.7 | 4.9 | 4.7 | 4.8 | 5.2 | |
| 19 Wood-work | .6 | 1.2 | .9 | .9 | 3.6 | 4.3 | 5.2 | | |
| 20 Needle-work | (7.7) | (7.5) | (7.8) | (7.8) | (7.8) | (7.4) | (9.3) | (10) | |
| 21 Cooking | (1.1) | (.9) | (1.1) | (.9) | (.9) | (.9) | (.9) | | |
| 22 French | .3 | .3 | .1 | .1 | .1 | 1.9 | 2.7 | 3.5 | |

TABLE XXXVII.—Showing the Percentage of Total Time given to Each Subject in Ten Cities of England.

| Subjects | London. | Man- chester. | West Ham. | Bolton. | Notwich. | Carlisle. | West Har- lepool. | New castle. | Welling- borough. | Castle ford. | Average Pct. |
|--------------------------|---------|------------------|--------------|---------|----------|-----------|----------------------|----------------|----------------------|-----------------|-----------------|
| 1 Scripture | 11.8 | 18.9 | 12.1 | 18.2 | 10.5 | 2.5 | 11.7 | 12 | 13.1 | 4.9 | 11.1 |
| 2 Reading | 11.4 | 11 | 12.4 | 12.9 | 9.5 | 13.1 | 10.7 | 11.9 | 7.8 | 17.4 | 11.1 |
| 3 Writing | 6 | 5.9 | 8.1 | 10.1 | 3.8 | 5.6 | 8.6 | 10.6 | 2.8 | 4 | 6 |
| 4 Spelling | 1.3 | 3.1 | 2.1 | 6.2 | 6.2 | 6.3 | | 3.3 | 2.3 | 6.9 | 3.5 |
| 5 Grammar | 6.5 | 5.9 | 2.5 | 6.2 | 4.1 | 5.3 | | 7.3 | 8.1 | 4 | 4.5 |
| 6 Recitation, Literature | 3.3 | 2.5 | 2.7 | 3 | 2.5 | 5.4 | 9.4 | 2.7 | 4.5 | 8 | 4.2 |
| 7 Composition | 4 | 2.6 | 2 | 1.7 | 14.3 | 7.1 | | 4.6 | 5.8 | 4.8 | 4.5 |
| 8 Arithmetic | 15.8 | 13.6 | 24 | 13.8 | 15 | 23.9 | 23.3 | 13.5 | 24.8 | 22.7 | 20.1 |
| Algebra | 3.1 | 2.7 | 7 | 1.1 | | | 3.5 | | | | 2.3 |
| 9 Geography | 6.3 | 6.3 | 4.5 | 5.4 | 5.1 | 5.7 | | 6.4 | 8 | 7 | 5.9 |
| 10 History | 4.4 | | 2.8 | 1.2 | 2.9 | 4.8 | 4.2 | | 5.5 | 2 | 2.9 |
| 12 Object Lessons | 4.3 | 2.8 | | | 2.6 | | | 4.3 | 3.4 | Insty | |
| 13 Elementary Science | | | 2.4 | 3.6 | | | 9.6 | | | 4 | 4 |
| 16 Physical Training | 4 | 4.5 | 2.4 | 4 | 2.3 | 5.4 | | 4.1 | 4.5 | 4 | 3.1 |
| 17 Drawing | 9.6 | 7.9 | 7 | 8 | 9 | 9 | 11.3 | 8.2 | 11.9 | 10 | 8.8 |
| 18 Singing | 4 | 4.5 | 4.8 | 3.4 | 4 | 5.4 | 6.6 | 6.2 | 3.8 | 4.9 | 4.8 |
| 19 Wood-work | 2.4 | 3 | 1.2 | 1.2 | 4.6 | | | | 3.1 | | 2.1 |
| 20 Needle-work | (5.4) | (8) | (11.4) | (8.7) | | | (22.6) | | (11.9) | (10.7) | (8.3) |
| 21 Cooking | | | | | | | | | | 5.4 | .8 |
| 22 French | 2.3 | | | | | | | | | | |
| Examination of Home Work | | | | | 3.2 | | | | | | |
| Varied Occupations | | | 2.3 | | | | | | | | |
| Domestic Economy | | | 3.8 | | | | | | | | |

The sparse attendance upon the seventh grade and the rarity of the eighth grade very much depreciate the value of our figures in these tables (XXXVI. and XXXVII.) for these two grades. The high score in these two grades is not real, but only relative. There are only two eighth grades and only six seventh grades found in these ten cities, and yet this proportion of seventh and eighth grades is comparatively larger than would be found if a larger number of English cities were included in this study. The aggregates for the seventh grade were divided by six and those of the eighth by two for the averages instead of by ten as in the other grades. So that the figures in these two columns should be reduced to approach the real status for all England. But in Tables XXVI. to XXXV. the facts are true to the individual schools from which they were selected.

The first subject on all English programs is RELIGION or Scripture as it is sometimes called. Of the seventy-eight examined, not one failed to provide for the teaching of the Bible; in the summary of the ten, arithmetic is the only subject which receives a larger time allotment. Study of this subject means Bible reading with comment and Bible study. A quotation from an English writer who sometimes indulges in sarcastic expressions with reference to the godlessness in the American and French schools, is pertinent here: "Parenthetically it may be stated that in practically all English primary schools undenominational religion or Bible teaching forms part of the curriculum. Bible reading without comment would be ludicrous if it were not pathetic. There are no Godless schools in England."*

The religious instruction is held usually the first thirty or forty minutes of the morning immediately after the opening of school at nine o'clock, which is the very best period of the day, and frequently the programs show provision for work in

* "The Making of Citizens," Hughes, p. 29.

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this subject at the last period of the day also. One hundred and fifty-five minutes per week throughout the eight grades is the average time assigned. The highest time allotment is found at Manchester, two hundred and sixty minutes per week; the lowest in the extreme north of England at Carlisle, thirty-five minutes per week.

The same provisions that occur in the Prussian law prevail in England, by means of which any child, if it is desired by his parents, may be excused from school during the conduct of the religious exercises. (Code, p. 185.) It is further stated in the law that "the Inspector shall not express any opinion as to time or allotment for religious observances or instruction, or as to the nature of such instruction, but shall confine himself to seeing that the prescribed amount of time is received for secular instruction." Religion and Scripture study, then, is not required, and not one cent of grant is paid for its provision, and yet few schools or grades are without that subject.

Table XXXVIII. gives a brief of the syllabus of the course of study in Scripture prescribed for the London schools by the School Board for the year ending July, 1904. The scores are so arranged as to show the importance of Biblical topics by reading the horizontal columns in which will appear the repetition of subjects from grade to grade. The word "learn" means memorize. There are twenty prominent sections, usually chapters, memorized by the pupil taking the entire elementary course. What a contrast must the scriptural knowledge of one of our children present to that of the least of these! The popular pedagogical cant stimulated into response by such accounts as the foregoing, is that memorizing the choice gems of the Bible is not studying the Bible. No one has claimed that for it, but only that it seems to supply a more hopeful basis for Bible knowledge than is found in the indescribable mental vacuity, in this respect, of the American school boy.

TABLE XXXVIII.—Course of Study in Scripture for Schools of London for the Year ending July, 1904.

| Standards | I. | II. | III. | IV. | V. | VI. | VII. | Ex.VII. |
|---|----|-----|------|-----|----|-----|------|---------|
| Learn Lord's Prayer | x | | | | | | | |
| Learn Psalm CXXVI | | | | | | | | |
| Learn Isaiah LX. | | | | | | | | |
| Learn Psalm XXIII. | | | | | | | | |
| Learn Ten Commandments | x | x | | | | | | |
| Learn Matthew V., 1-12 | | x | x | x | x | x | x | x |
| Learn Matthew XXII., 38-40 | | | x | x | x | x | x | x |
| Learn Psalm CXXI. | | | x | x | | | | |
| Learn Psalm CXXI. | | | | | | | | |
| Learn John XIV., 1-14 | | | | x | x | x | | |
| Learn Psalm CXXV. | | | | | | | | |
| Learn I Corinthian XII., 31; XIII. | | | | x | | | | x |
| Learn Psalm XCI. | | | | | x | | | |
| Learn Proverbs III., 1-18 | | | | | x | | | |
| Learn Proverbs XXIII., 20-21 | | | | | x | | | |
| Learn Romans XIII., 8-10 | | | | | x | | | |
| Learn Isaiah LII., 13-16, and LIII. | | | | | | x | | |
| Learn Psalm CXXII. | | | | | | | | |
| Learn Isaiah LXI. | | | | | | | | |
| Learn Hebrew I. | | | | | | | x | x |
| Learn Psalm XC. | | | | | | | x | x |
| Learn Psalm XC. | | | | | | | x | x |
| Simple Stories from Genesis X. | x | | | | | | | |
| Facts from the Life of Christ told in Simple Language | x | | | | | | | |
| Lessons from the Life of Moses | | x | | | | | | |
| Simple Lessons from Life of Christ | | x | | | | | | |
| Lessons from Lives of David, Samuel, Ruth | | | x | | | | | |
| The Life of Christ with Lessons from the Parables | | | x | | | | | |
| Lessons about the Patriarchs based on the Pentateuch | | | | x | | | | |
| Lessons from St. Luke I.-XIII. | | | | | | | | |
| Lessons from St. Luke XIV. to End | | | | x | | | | |
| Lessons from Book of Joshua | | | | | x | | | |
| Lessons on the Life and Times of Elishah | | | | | | x | | |
| Lessons from the Sermon on the Mount, Matt. V., VI., VII. | | | | | | x | | |
| Lessons from Gospel of St. John I.-XIII. | | | | | | | x | |
| Lessons about Hezekiah and from Book of Daniel | | | | | | | x | x |
| Lessons from John XIV. to End | | | | | | | x | x |
| Study of the Acts of the Apostles I.-XII. | | | | | | | x | x |
| Study Acts XIII.-XXVIII. | | | | | | | | x |

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In **READING** the surprising feature is the small amounts of actual and of relative time. The percentage is scarcely more than half that found in the American tables, and the actual minutes per week in the primary grades are only half what they are in the American primary grades. But if the time devoted to the teaching of the Bible be added to the time given to reading, then the total is equal to the total time given to reading in America. The suggestion is that Bible teaching may be an auxiliary to reading, and that the English people teach this additional subject with no loss of time, whereas we omit it, and still save no time by the rather costly omission.

The absence of **SPELLING** on the required list of the Government (see Table XXIV.) and its poor showing in the grade summary of Table XXV., are further corroborated in the time allotment tables by an average of only 3.5 per cent (Table XXXVI.).

The relative total time given to **LANGUAGE** is practically the same as with us, but the absence of stress upon literature and the accentuation of formal grammar already mentioned, are clearly shown by these tables. It appears also that attention is given to grammar in the earlier grades, while it is very rarely taught before the fourth grade with us.

In **ARITHMETIC** the English course shows 3 per cent more time than the American, with about 5 per cent more in the earlier grades. Mathematics shows relatively more time in England than in any of the four countries examined. If the 2.38 per cent given to algebra be added to the percentage for arithmetic, it will be seen that this study exceeds the next most prominent subject by 11.38 per cent. Mental arithmetic is also included in most of the syllabi, its prominence being an English distinction.

HANDWORK.—Drawing for boys and sewing for girls are given at the same time. Consequently, the parenthesis refers to the fact that the subject enclosed is not to be counted in

getting the total weekly recitation time. In each of these subjects much more earnest activity is shown than with us. There is over 2 per cent more time given to drawing than is given in any American school. While sewing is an unknown subject in most American schools, it receives 8.3 per cent of the total recitation time of girls in these twenty-two English schools.

It may very much surprise the enthusiastic advocates of the "new education" in America to learn from the data herewith compiled, that a child is offered a far wider selection of courses in handwork in the English elementary school than in America. The following quotation is from "The Educational System of Great Britain and Ireland" (pp. 39-42), by Graham Balfour: "The whole tendency of the education of young children in England of late years has been in the direction of sense training,—object lessons and manual employment. The chief subjects for girls encouraged by the Department of Elementary Schools are (besides needlework and cutting out) cookery, domestic economy, laundry work, dairy work, practical housewifery and domestic science. Boys are encouraged to take shorthand, book-keeping, agriculture, cottage gardening, drawing and manual training. Since 1890 drawing has been compulsory for boys and manual training has been placed on the extra-grant list in public elementary schools." Our tables have borne out this claim.

PHYSICAL CULTURE.—More actual time and attention are spent in the care of the health and the development of the physical self in the schools of England than in either France, Germany or America. The time allotments, while making a fairly good showing, do not properly indicate the status of physical culture in the English schools, for the English organize games in the recess periods and conduct numerous systematic sports after school hours that are not shown in the time allotments. Physical culture in America is almost entirely confined to the indoor gymnastics, whenever such is offered.

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Recess counts for very little as compared with the two-hour periods of England. Even when it is sufficiently long to serve the purpose of recreation the teacher in America has very little to do with it. We are content to urge the advantages of parks and playgrounds for our children, and plenty of room and air, and to leave it at that. These offer opportunities, but they furnish no guarantee of physical development.

6. *Analysis of the Content of Studies into Topics.*

We have discussed the importance of subjects in the curriculum of English elementary schools as measured (1) by the judgment of the Board of Education, (2) by the distribution of schools adopting certain subjects, (3) by the recurrence in several successive grades of the same subject and (4) by the quantity of time devoted to each subject. It now only remains to consider the intrinsic value of a subject as measured by what there is in it. "What are the topics into which one large subject is divided?" we ask. And again, "In what grades and in how many grades are these topics taught?" The answer to this last question will help to find the important topics in a given subject, as measured by the schools and teachers of England.

The following five tables, XXXIX.-XLIII., answer the above questions without the need of comment. Some of the topics overlap, but an omission of a topic or a synthesis of topics of this character would have destroyed the value of the topics. Twenty-two of the larger cities and towns, located in eight different counties, are represented in four of the tables. The analysis of nature study is made up from seventeen curricula. The figures show the number of curricula in which a subject is taught within a given grade. A topic may be repeated for the sake of review, or it may receive more stress in certain grades, or it may be distributed throughout all the grades.

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TABLE XXXIX.—Showing the Topics in Arithmetic and their Distribution by Grades in the Public Elementary Schools of twenty-two English Cities.

| Standard | I. | II. | III. | IV. | V. | VI. | VII. |
|------------------------------------|----|-----|------|-----|----|-----|------|
| Notation and Numeration | 12 | 8 | 4 | | | | |
| Addition | 20 | 15 | 10 | | | | |
| Subtraction | 20 | 15 | 12 | | | | |
| Multiplication | 15 | 20 | 19 | 2 | | | |
| Division | 9 | 21 | 22 | 2 | | | |
| Denomination Numbers | | | | 21 | 15 | 12 | |
| Addition and Subtraction Fractions | | | | | 7 | 3 | |
| Common Fractions | | | | | 14 | 10 | 4 |
| Decimal Fractions | | | | | 1 | 20 | 4 |
| Simple Proportion | | | | 1 | 4 | 17 | 3 |
| Simple Interest | | | | | | 18 | 2 |
| Averages | | | | | | 2 | 7 |
| Percentages | | | | | 1 | 4 | 8 |
| Stocks | | | | | | 1 | 7 |
| Simple Rule of Three | | | | 1 | 4 | 5 | |
| Bills of Parcels | | | | | 19 | | |
| Compound Proportion | | | | | | 3 | 3 |
| Investments | | | | | | | 1 |
| Greatest Common Divisor | | | | | 4 | 2 | 1 |
| Lowest Common Multiple | | | | | 5 | 7 | 7 |
| Metric System | | | 1 | 4 | 5 | 12 | 1 |
| Square Root & Cube Root | | | | 1 | 2 | 13 | 2 |
| Mensuration | | | | | | | |

It will be noticed that nearly all of the topics in ENGLISH are included under grammar. The literary reader, poetry and recitation receive a high score, a fact which somewhat modifies the former statement regarding the predominance of formal grammar and the absence of literature. A high score indicates the actual practice rather more than numerous topics do. However, to make the score of formal grammar equal to that of literature, in our opinion, is to give grammar too great prominence.

The importance of HOME GEOGRAPHY (p. 81), suggested by previous tables, is verified by Table XLI. The popularity of geographical definitions in the first and second grades would doubtless irritate an American specialist in geography or child psychology, because of the barrenness and abstraction of the topic to children of such an age. Numerous geographical readers are used to teach many of the topics here outlined.

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TABLE XL.—Showing the Topics in the English Language and their Distribution by Grades in the Public Elementary Schools of Twenty-two English Cities.

| Standard | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|------------------------|----|-----|------|-----|----|-----|------|-------|
| Recitation | 13 | 10 | 11 | 11 | 12 | 8 | 6 | |
| Literary Reader | 7 | 7 | 7 | 10 | 8 | 9 | 6 | |
| Poetry | | 2 | 2 | 3 | 2 | 2 | 2 | |
| Orthography | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 |
| Etymology | | | | | 2 | 2 | | 1 |
| Composition | 7 | 11 | 10 | 11 | 15 | 11 | 9 | |
| GRAMMAR | | | | | | | | |
| Subject and Predicate | 2 | 4 | 2 | 1 | 2 | 1 | | |
| Verbs | 3 | 12 | 4 | 4 | 2 | | | |
| Nouns | 6 | 10 | 5 | 2 | 2 | 1 | | |
| Adjectives | 1 | 6 | 10 | 4 | 3 | 2 | | 1 |
| Adverbs | 1 | 1 | 7 | 5 | 2 | 2 | | 1 |
| Pronouns | | 3 | 9 | 4 | | 1 | 1 | 1 |
| Prepositions | | | 1 | 3 | 1 | | | 1 |
| Interjections | | | | 1 | | | | 1 |
| Cases | | 1 | | | 1 | | 1 | |
| Agreement | | | 1 | | 1 | | | |
| Mood & Tense | | 1 | | | 1 | | | |
| Gender, Number, Person | | 1 | 2 | | 2 | | 1 | |
| Punctuation | | | | | | | | |
| Compound Sentences | | | | | 1 | | | |
| Analysis & Parsing | | 1 | 1 | 8 | 10 | 11 | 12 | 1 |
| Qualities of Verbs | 1 | | 1 | 1 | 1 | | 1 | 1 |
| Inflections | | | | | | | 1 | |
| Conjunctions | | | 1 | 1 | | 1 | | |
| Parts of Speech | 2 | 4 | 3 | 5 | 4 | 1 | | |
| Kinds of Sentences | 2 | 2 | 2 | 1 | 2 | | | |
| Conversation | 2 | 2 | 2 | 1 | 2 | | | |

The one conspicuous fact learned from Table XLII. on the topics in HISTORY is that various historical readers constitute the topics under this head. Local and national history are presented in an excellent literary form. Many American historians have felt that this could not be done without compromising either the historical or literary ideal. It is interesting to notice, however, among the modern movements in America the attempt to secure primary histories with just the qualities found in the English readers.

There seem to be fewer topics in ARITHMETIC than with us, and yet perhaps half of these might be omitted without detriment to the child.

We come in Table XLIII. to a subject of instruction, NA-

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TABLE XLI.—Showing the Topics in Geography and their Distribution by Grades in the Public Elementary Schools of Twenty-two English Cities.

| Standard | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|--|----|-----|------|-----|----|-----|------|-------|
| Home Geography | 9 | 8 | 2 | | | | | |
| Definitions of Outlines of England | | 4 | 5 | 1 | | | | |
| Outlines & Political Geography England & Wales | | | 14 | 1 | | | | |
| Outlines and Political Geography of Ireland | | | 2 | 20 | | | | |
| Europe | | | | 3 | 19 | 1 | 1 | |
| India | | | | | 1 | 9 | 2 | |
| Africa | | | | | 2 | 6 | 5 | |
| Foreign Possessions | | | | | 4 | 11 | 3 | |
| Scotland | | | 3 | 21 | | | | 1 |
| Australia | | | | 5 | 3 | 6 | 1 | |
| United States | | | | | 2 | 5 | 8 | |
| Outlines of Earth | 1 | 1 | | 1 | | | | |
| Geographical Terms | 13 | 13 | 1 | | | | | |
| Canada | | | | 6 | 4 | 6 | 4 | |
| England | | | 2 | 12 | | 2 | 1 | |
| New Zealand | | | | 2 | 4 | 3 | | |
| Tasmania | | | | 1 | 1 | 1 | | |
| Mexico | | | | | | 1 | 1 | |
| Central and South America | | | | | | 1 | 1 | |
| West Indies | | | | | 2 | 1 | | |

TABLE XLII.—Showing the Topics in History and their Distribution by Grades in the Public Elementary Schools of Twenty-two English Cities.

| Standard | I. | II. | III. | IV. | V. | VI. | VII. | Extra VIII. |
|---------------------------------|----|-----|------|-----|----|-----|------|-------------|
| Historical Reader | 6 | 9 | 14 | 17 | 16 | 16 | 13 | 1 |
| Tudor Period | | | | 1 | 5 | 1 | | |
| Stuart Period | | | | | 3 | 6 | 3 | |
| Historical Biography | 1 | 1 | 1 | | | | | |
| Topics by English Sovereigns | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Stories from 1066—Tudor Period | | | | 3 | | | | |
| Norman Period | | | | | 2 | | | |
| General Outline English History | | | | 1 | | | 2 | |
| Plantagenet | | | | | | 1 | | |
| Hanover | | | | | | 1 | | |

TURE STUDY, whose chief characteristic is its impenetrable confusion of topics. There were such numerous unrelated topics that it was impossible to give them all, so they have been grouped under the best known topics. This is not so difficult to do in an English school, for there the emphasis is more completely laid upon the formal side of the study than with us. In two of the syllabi, there were one hundred and fifty-two

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TABLE XLIII.—Showing the Topics around which Object Lessons tend to be grouped in Seventeen English Schools, together with the Number of Cities and Grades in which They are taught.

| Standard | I. | II. | III. | IV. | V. | VI. | VII. |
|------------------------|----|-----|------|-----|----|-----|------|
| Physics | 15 | 13 | 14 | 12 | 12 | 10 | 5 |
| Chemistry | | | 1 | | | 1 | 1 |
| Physiology | 1 | 1 | 1 | 4 | 5 | 2 | 3 |
| Hygiene | 1 | 1 | 1 | | 2 | | |
| Animal Study | 4 | 6 | 8 | 3 | 1 | 2 | 3 |
| Plant Study | 1 | 4 | 4 | 5 | 4 | 5 | 4 |
| Neighboring Industries | | | | 2 | 2 | | |
| Geology | | | | | | | 1 |

topics, all of equal value. No casual sequence or any other kind of sequence seemed to bind the topics together. Not quite as much confusion was found in the ten American syllabi studied, but still there is little unity.

Valuable experiments are being undertaken in some of the English schools looking toward making nature study a center of correlation. It is made the point of departure for teaching all the other subjects in the primary grades in several of the syllabi examined. One such syllabus was forwarded by the Inspector over his signature, stating that it was the best school showing the correlation around nature study in his district. The results did not seem to the present writer to warrant any definite conclusions, but it is mentioned here for the benefit of others who may wish to employ nature study in similar experiments. The work now being done in nature study in the London schools would well repay careful study upon the part of American educators.

7. *Method of Relief from the Overcrowded Curriculum.*

The foregoing topics afford several suggestions to the American teacher interested in the relief of the OVERCROWDED CURRICULUM. In the first place there are few readers which are not geographical, historical, literature or nature study readers. The former criticism of the doubtful literary value of such readers is being rapidly dissipated in recent years. The

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study of geography and history is confined to text-books relating to England and its possessions, leaving out the study of comparatively unimportant countries and making no effort, as we do, to cover the globe. In arithmetic, topics which do not have a place in the lives of the children are omitted, for example, rule of three, cube root, partial payments, Troy weight, etc. Even in language study the English have shown a tendency towards omission. In nature study they seem as much confused as we are, yet perhaps the grouping of the various topics under the pure sciences is an indication of an effort to systematize. The outright omission of relatively unimportant subjects, and the grouping of many others around a few larger topics, are the suggestions from the English curriculum which may help us to a solution of the problem of overcrowding.

8. Conclusions.

In the previous pages we have presented data relative to several features in the English elementary curriculum, the larger part of it bearing directly upon the content, the time allotments, and the importance of the various subjects within the curriculum. The facts have been allowed to tell their own story, and to suggest in themselves the points of discussion. We have had no theories to prove, but have only been desirous of discovering the truth as presented by the data. Some of the conclusions have been mentioned immediately after explanation of the statements, and need not be repeated. But it may be well to state briefly certain other more general conclusions, whether derived in a negative or a positive way from this study. Space is not allowed to draw all the implications involved in the data; much is left for the interested educator to do.

Summarizing then, we should say that the order of importance attached to subjects by the English school is about as follows. The "three R's," as usual, usurp the first place. The

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second rank will be contested for by religion on the one hand, as against grammar and composition combined on the other. The third place is disputed by drawing, needlework and singing. Physical training should be placed fourth, when we remember the great attention devoted to this subject during the long recess periods over and above that provided for within school hours. Geography and nature study take fifth place, while history comes last. These thirteen subjects, with the additional electives, make quite as rich an actual curriculum as is found in the American schools.

Theoretically, the elective system of England is very desirable. It offers a wide scope for the individual development of the child and for adjustment to his individual environment. But owing to the coercive influences of the parliamentary grant system, few electives are really taught. However, America will do well to learn from the ideal involved in the elective system.

There is perhaps a larger actual provision in our curriculum for child development than in England, as we do not distribute the subjects over the grades so regardless of the capacities of the child as do the schools of England. In the second place, the grade is the basis of electives and not the pupil in England. While this perhaps offers a more sensible manner of providing electives for the school, yet it does not contribute as much to individual development as does the other form of offering electives. And yet, possibly, the English supply more subjects from the immediate knowledge and environment of the child, and make more appeals to motor-activity and to sense training than we do.

The provisions of their curriculum would give more freedom to a principal and more help to a teacher, because the required syllabus and curriculum is individual to the school, whereas with us the same curriculum is given for the whole city.

England may teach us how to discover a central bureaucratic system which will unify the curriculum for the whole country and yet allow individual electives adaptable to different environments.

Can there be an organic relation between the kindergarten and the primary grades ? The English answer in the affirmative, and show how it may be done, so far as the subject matter is concerned.

There is an evil tendency shown by such high school subjects as algebra, French and pure science, to wedge their way into the elementary curriculum without preparation for them. Education by development is only possible with a curriculum which is itself a related whole and a development from the first to the eighth grade.

More attention is given to motor-active subjects in England than in America, and at the same time more time and attention are given to the formal. They likewise give a great deal more memory work than we, in memorizing gems of literature and selections from the Bible, and in mental work in arithmetic. Our gain is in the volitional, semi-scientific and the æsthetic, represented by history, geography, reading and literature.

The most severe criticism to be made upon the English curriculum is in regard to the absence of a serious provision for the emotional, the volitional, and in some senses, the æsthetic, in the curriculum, and the supreme predominance of the intellectual.

We have criticised the English distribution of difficult subjects in grades containing children too young to grasp them; and yet we have the feeling that some plan providing for the study of different phases of a subject throughout several grades should be discovered in America. This would afford the opportunity for review which is so poorly provided for in the American curriculum.

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Finally, it has been pointed out that the English avoid overcrowding of the curriculum (1) by an increase of recitation time, (2) by employing in reading books texts which relate to other subjects, (3) by a free omission of topics.

CHAPTER III.

THE CURRICULUM OF PUBLIC ELEMENTARY SCHOOLS IN CITIES OF GERMANY.

1. Description of the Elementary Schools of Germany.

The German people's school (Volksschule) has been chosen for this study as representative of the public elementary schools of Germany. As a sufficient justification for this selection let us state that 5,236,826 school children were enrolled in the Volksschule of Germany in 1896,* whereas the latest reports show that only 5,670,870 children are enrolled in all the elementary and secondary schools of Germany.

The German Empire is a federation of twenty-six states, composed of four kingdoms, six grand duchies, five duchies, seven principalities, three free cities and one imperial territory. Each of these twenty-six states has a separate government. Each state maintains its own school system. There is no national system of education, nor is there a national law referring to education in the states as a whole. Hence, whatever study is made of any phase of education in Germany must either apply to each state separately or to one state as a type of the others.

It has been claimed by most writers that Prussia is representative of the entire twenty-six states. This opinion, in the main, will receive substantiation in the following pages, so far as the subjects of instruction are concerned. A brief account of the Prussian plan of regulating the course of study follows.

*Report of Commissioner of Education, 1899-1900, p. 769.

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In Prussia the State exercises complete control in educational affairs. There are no private schools in the sense that any school is free from governmental inspection and control. Both the selection of subjects taught and the certification of teachers are regulated by the central authority at Berlin.* Control in educational affairs is vested by the king of Prussia in the Minister of Education, whose official title is "Minister of Ecclesiastical, Educational and Medical Affairs." He is a member of the King's Cabinet and possesses all the powers pertaining to a Cabinet officer. The will of the Minister is executed through four sets of school boards, whose executive and territorial authority decreases according to the order here named. The kingdom is divided (1) into thirteen provinces, each with its respective school board appointed by the Minister. These provinces are comparable in some respects to our States. (2) The thirteen provinces are each divided into thirty-six counties (*Regierungen*) with their respective school boards appointed in part by the king and in part by the provincial school boards. (3) The counties are further divided into large townships, or districts (*Kreis*), comparable to our townships. Each township also has its school board. Each township school board appoints a special school committee for each school within its territory.

The course of study for the elementary schools of Prussia, as is true in all the German schools, is prescribed in outline by the Minister of Education and his collaborators on behalf of the State. It is interpreted and adapted in accordance with this outline by the county (*Regierung*) school board, which is practically appointed by the central government, and whose territory frequently includes nearly a million inhabitants. Neither the township (*Kreis*) nor the local school board has any choice in the selection of subjects of instruction or in the selection of

* "The Making of Citizens," Hughes, p. 67.

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text books for their children.* Approximately the same bureaucratic system exists in all the German States as in this of Prussia.

TABLE XLIV.—Showing the Number of Minutes per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given to Each Subject in the Public Elementary Schools (Volksschulen) of Prussia.

| Divisions Age of Pupils | Lower 6-8 | | Middle 8-11 | | | Higher 11-14 | | | Pct. |
|-----------------------------------|--------------|-------|----------------|-------|-------|-----------------|-------|-------|-------|
| | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | |
| Grade. | | | | | | | | | |
| 1 Religion | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 14.5 |
| 6 Language ¹ | 660 | 660 | 480 | 480 | 480 | 480 | 480 | 480 | 32 |
| 8 Arithmetic | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 14.5 |
| 9 Geography | | | | | | | | | |
| 10 History & 12 Object Lessons | | | 360 | 360 | 360 | 360 | 360 | 360 | 16.4 |
| 16 Gymnastics | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 7.3 |
| 17 Drawing | | | 120 | 120 | 120 | 120 | 120 | 120 | 6.9 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | 120 | 120 | 120 | 6.4 |
| 20 Handwork for Girls | (120) | (120) | (120) | (120) | (120) | (120) | (120) | (120) | (7.3) |
| Geometry | | | | | | 120 | 120 | 120 | 6.6 |
| Total | 1320 | 1320 | 1680 | 1680 | 1680 | 1800 | 1800 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|-------------------|-----|-----|-------|-------|-------|-------|-------|-------|--|
| 1 Religion | 18 | 18 | 14.3 | 14.3 | 14.3 | 13.3 | 13.3 | 13.3 | |
| 6 Language | 50 | 50 | 28.6 | 28.6 | 28.6 | 26.6 | 26.6 | 26.6 | |
| 8 Arithmetic | 18 | 18 | 14.3 | 14.3 | 14.3 | 13.3 | 13.3 | 13.3 | |
| 9 Geography, etc. | | | 21.5 | 21.5 | 20.5 | 20 | 20 | 20 | |
| 16 Gymnastics | 9 | 9 | 7.2 | 7.2 | 7.2 | 6.7 | 6.7 | 6.7 | |
| 17 Drawing | | | 7.2 | 7.2 | 7.2 | 6.7 | 6.7 | 6.7 | |
| 18 Singing | 4.5 | 4.5 | 7.2 | 7.2 | 7.2 | 6.7 | 6.7 | 6.7 | |
| 20 Handwork | (9) | (9) | (7.2) | (7.2) | (7.2) | (6.7) | (6.7) | (6.7) | |
| Geometry | | | | | | 6.7 | 6.7 | 6.7 | |

¹ Includes reading, writing, literature, etc.

Table XLIV. shows the subjects prescribed by the Minister of Education in Prussia for schools with more than one teacher. It will be seen that the subjects are arranged in three divisions, suitable for children from six to eight years of age, from eight to eleven, from eleven to fourteen. The eight years of compulsory attendance are thus provided for. This

* "The German School System," Seeley, p. 63.

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division of subjects and time allotments must be adhered to regardless of the number of teachers.

A course is provided, however, for a one teacher (or class) school. It differs from the other one in assigning slightly more time to religion, language and arithmetic, and in omitting all the other studies, except singing, from the lowest division.

When a school has four teachers, the law requires that the middle division be further divided into two sections and that one teacher be given charge of each section, thereby placing emphasis upon the importance of the middle division to the neglect of the lower and upper. This is contrary to the practice in France, where the kindergarten is better known and in more demand than in Germany. If a German school has six teachers, two are given to each division of the school.

In Table XLIV. and those that follow, the parenthesis is used in two ways: first, to show that the minutes thus inclosed are devoted to a recitation for girls, which is held during the same time that some other subject is being recited by the boys; second, when a cypher is thus enclosed, to indicate that such a subject in that grade is not required of girls.

2. Length of School Life and the School Knowledge of the German Child.

The element of TIME in the German elementary schools is regulated by the State with as great care as the selection of subjects. In Prussia at least forty-five weeks of school attendance are required per year. This gives considerably shorter vacations than in America. These vacations occur at different times—one week at Whitsuntide, three or four weeks at the “harvest vacation,” occurring some time between August and October, and one week at Christmas. Usually the pupils spend six hours in school each day in the week except Sunday, Wednesday and Saturday. In Prussia the school hours are either from eight to twelve and two to four, or from eight to

twelve and one to three, or from eight to two. On Wednesdays and Saturdays pupils are allowed the afternoons for holidays.

If we add to these regulations as to time, the compulsory educational requirements, several interesting conclusions should be forced upon the American educator. Education is compulsory in every German State.* The period of attendance is almost the same in all States. In Prussia it is from the age of six to fourteen; in Bavaria, six to thirteen; in Würtemberg, seven to fourteen; in Saxony, six to fourteen; in Baden, six to fourteen.

It may, therefore, be said that German children are required by law to be in school more years during their lives, more weeks during a year, more days during a week, more hours during a week and more hours during a day than American children. Table XLIV. shows that this is particularly true of Prussia. It appears that Prussia devotes from two to three hours more a week to recitation than do the other German provinces. Table LV. corroborates this, where the average recitation time for the ten cities distributed over the Empire is seen to be less than it is for Prussia, as shown in Table XLIV. The cities usually, however, increase the time prescribed by their respective governments.

Since there are more school children in Prussia than in all the rest of the German Empire, if the data were available it would be interesting to make a comparison between the average weekly recitation time in the ten American cities shown in Table XII. and ten Prussian cities of equal size. But in the absence of such data, we may, by making due allowance, compare the Prussian Table XLIV., which shows the *minimum* time allotment for schools of the kingdom, with Table XII., which probably shows an average time allotment for American schools. It is seen that the Prussian child is in school 1635 minutes per week on the average, and that the American child

* "The German School System," Seeley, p. 239.

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is in school on an average only 1312 minutes per week, a difference of five hours and twenty-five minutes.

Objection is raised to such comparison that four hours of the Prussian weekly assignment are given to the teaching of religion, which is not included in the American curriculum. This objection, of course, is not altogether valid, for the fact still remains, so far as the Prussian child is concerned, that he is in recitation nearly a school day more a week than his American cousin, which, if it be questionable from a physiological point of view, is quite as detrimental if he is reciting in religion as if he were reciting in any other subject. In the second place, it is true to some degree at least that this study, as conducted by the Germans, diminishes the time necessary for other studies, such as reading. But if the four hours per week spent in reciting this subject were excluded, the Prussian child would still be in school one hour and twenty-three minutes per week more than the American.

By comparison of the average weekly school time in the ten German cities with that in the ten American cities (see Tables LV. and XII.) the difference in minutes per week by grades is found to be as follows:

| | | | | | | | | |
|----------------|----|-----|------|-----|-----|-----|------|-------|
| Grades | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
| Minutes | 84 | 13 | 217 | 205 | 417 | 378 | 483 | 535 |

This shows an increase of the German over the American allotments except in the first grade. In brief, the average increase for the ten German cities is four hours and a half a week, the equivalent of an American school day, which corroborates the comparison made above between the curriculum prescribed by the central authority in Prussia and that found to be the average in the ten American cities. Moreover, if we eliminate religion as a topic consuming recitation time in Germany and likewise the opening exercises in America, the German child still attends school an hour and a half more per week.

The foregoing time requirements and distinctions are absolutely essential to an adequate comprehension of the course of study in the elementary schools of Germany.

Furthermore, the hours per week spent in recitation by the German child are so interesting in their implications that they should be brought to the attention of the American educator. Is it unhygienic conditions, or very long lessons, or the strain of lengthy recitation periods, or physical fatigue resulting from the excessive length of the daily school period, which are responsible for the complaint of the American parents that their children are being overworked in school ? Or can it be that the superfluous number of subjects and of topics, or ennui resulting from the uninteresting methods of the teacher, are accountable for the complaints ? This study does not pretend to answer all these questions. If the physical exhaustion of the American child is due to the length of the recitation period (in Germany the recitation period is from forty to sixty minutes), or to the length of the daily, weekly or annual school sessions, then one of two things is certain,—either the Germans are slowly murdering their children in the schools, or the German child is much stronger physically than the American child.

It is asserted by men who have been educated in the German schools that they are not physically wrecked by the process.*

In fact, there has been no sign in recent years pointing to the decay of the vitality of the German race. On the other hand, no one would readily assent to the proposition that the German child is naturally stronger than the American child; and we will abandon as ludicrous the contention that the pupil to answer all these questions. If the physical exhaustion of climatic differences.

Therefore, although the evidence is not conclusive without

* "School Reform," by Dr. Hugo Munsterberg, in *Atlantic Monthly*, May, 1900.

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investigating numerous other contingencies, the weekly time allotments in the German schools seem to suggest that the American child could spend an hour more a day in school if it were necessary, without physical detriment.

3. *Overcrowding.*

OVERCROWDING in the course of study is the problem in America for which we are diligently seeking a solution; but the overcrowding of the school itself throughout Germany, and not of the curriculum, is one of the serious problems which has affected the course of study in many ways. It undoubtedly accounts for the restriction of the course of study to a few subjects in order to save time. It has its effect also in ironclad regulation by the central authority of the time devoted to the respective subjects. In a state in which many of the teachers have twice as many pupils as they are able to instruct, no risks can be taken in allowing the teachers to choose what subjects shall receive special emphasis. All sorts of devices have been resorted to in order to overcome the evil of overcrowded classes. The popular "Simple" school is an attempt to decrease the size of the classes by allowing half the children to attend in the forenoon and half in the afternoon. But while it serves to decrease the size of the classes, it is questionable if the loss of the time spent in school does not offset this gain.

In Prussia the maximum number of pupils allotted one teacher by law is eighty for a one class (one teacher) school, and seventy for each teacher in schools where there are more than one teacher.* As a matter of fact, however, the class assigned to one teacher is often much larger than this in Prussia. "In 1891 it was reported that as many as 1,309,175 children were taught in classes (grades) numbering between

*Special Reports on Educational Subjects, Michael E. Sadler, Vol. IX, p. 836.

eighty-one and one hundred children in the country and seventy-one to ninety in the town schools." * It is, therefore, not to be wondered at that the curriculum is in such a static condition and that individual variation is impossible. The excessive overcrowding of the schools necessitates uniformity in order to secure the least possible loss of time.

And yet, with all this overcrowding of pupils in schools not sufficiently staffed to accommodate them, in schools where a teacher is frequently given twice as many pupils as the American teacher, you hear no complaint from Germany of an overcrowded time table. How is this to be explained?

In the first place, it is not true, as many suppose, that the public elementary school of Germany attempts to teach as many subjects as are attempted in the American elementary school. Reference to Tables I. and XLIV will show that there are many subjects taught in *some* schools of America, which are not prescribed for *any* of the schools of Prussia, such as manual training, cooking and modern languages. May it not be that it is from these few American cities, which have voluntarily overloaded the children of the public schools, that much of the complaint comes?

In the next place, if any of the ten Germany cities are compared with any of the American, it will be found that there are less time allotments made in the former than in the latter, even though nearly all the subjects taught in the one are found in the other. If the curriculum of New York City (Table II.) is compared with that of Berlin (Table XLV.) it will be seen that there are many more allotments to topics on the New York table. An examination of the syllabi of the two cities shows a remarkable difference in the number of topics in each subject. As a consequence, there is less order in the curriculum with us and more restless commotion among the teachers and pupils. The New York City teacher and pupil are both of them kept

* "The Making of Citizens," Hughes, p. 81.

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nervous by the number of recitations which must be accomplished each week, on account of the presence on the time table of such a large number of topics.

It is the presence of time assignments to so many topics which gives both the appearance and the results of an overcrowded curriculum. The nervous strain of divided attention is probably a factor in the widespread complaint of the overcrowding in our elementary curriculum.

To throw further light upon this matter, a list of topics taught in several subjects, as outlined in the syllabus now in operation in the Berlin public elementary schools, is here given. In ARITHMETIC the topics in the respective grades are as follows:

Grade I.—Counting, addition, subtraction.

Grade II.—Counting, addition, subtraction, multiplication, division, fractions.

Grade III.—Continue work of Grade II.

Grade IV.—Continue work of Grade III. and take factoring.

Grade V.—The four fundamental operations; fractions, denominate numbers, and practical problems.

Grade VI.—The same as in Grade V., and decimal fractions.

Grade VII.—The four fundamental operations; also proportion, exchange, discount, business forms and insurance.

Grade VIII.—The same as in Grade VII., except that practical problems and simple algebraic equations are substituted for proportion.

Table XIV. shows that there is no such agreement upon a few well ordered topics among American teachers of arithmetic. It is furthermore noticeable that the second half of the ordinary American arithmetic is largely neglected, and that when taken at all it is in the last two grades only.

In the German schools when a topic in HISTORY is chosen

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it always has bearing upon German history. Thus again a great loss of time is avoided. History begins with the following topics:

Grade IV.—National biography.

Grade V.—Review biographies; take the Reformation, the Thirty Years War, the Crusades, chivalry, growth of towns, inventions, discoveries, and the founding of the kingdom of Prussia.

Grade VI.—National biographies, the American revolution, the French revolution, the Napoleonic Empire, analysis of the Prussian government, and the freedom and union of Italy.

Grades VII. and VIII.—The history, government and civilization of Germany and Prussia.

The brevity of topics, and the predominance of the biographical and of national history are the characteristics of this five year course in history. When we add to this the fact that the outline of geography is governed by the same rule, one can begin to perceive why there is no complaint of overcrowding among the German teachers. In the syllabus of geography for the Berlin schools, there is no mention of the geography of America. With but one exception, the geography of Germany is the only topic occurring in two grades, for the German method is to settle upon that which is at the same time nearest and most important to the child and to omit the rest. They are willing to do what we are not, viz., omit the unnecessary, and to recognize that all knowledge is not co-ordinate and of equal value.

In harmony with this same method of organically relating the matter of instruction around a few large and relatively important topics, is found the course of instruction in

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Grade I.—Nine scenes from the early life of Christ.

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Grade II.—(1) The story of two Old Testament patriarchs related to Christ; (2) eight scenes from the later life of Christ.

Grade III.—(1) Moses; (2) David; (3) Peter.

Grade IV.—(1) The patriarchs; (2) primitive life; (3) the wanderings of Israel; (4) the Judges.

Grade V.—(1) The history of the growth of Israel as illustrated by biographies; (2) study and memorizing of Psalms; (3) catechism; (4) church history.

Grade VI.—The same as Grade V., also (1) parables; (2) Sermon on the Mount; (3) study of the life of Jesus.

Grade VII.—The same as in Grade V., also memorizing select passages.

Grade VIII.—The same as in Grade VII.

Church songs are memorized and learned in all grades.

Perhaps enough of the analyzed syllabus of the Berlin schools has been given to illustrate the methods by which relief of overcrowding is accomplished in the German schools, through organization of the subject matter by higher authorities. We have already shown that the German teacher and pupil work longer than we do in America. From the vast amount of home work prescribed for the child, in this syllabus, one would gather that the pupil also works harder than do our pupils.

The child is saved from overwork by the delay of subjects until he is capable of handling them, and by concentrated study of one subject. Those definitions and topics regarding the solar system, etc., in geography appear much later in the Berlin curriculum than in ours. The syllabus orders that one primer shall last a grade one year. In America it sometimes takes a half a dozen to supply pictures with which the teacher "interests" the children for that length of time,

4. *Uniformity.*

But perhaps after all the strongest influence against overcrowding in Germany is the determination of the German educators to organize and systematize the material of instruction, so as to avoid waste at every turn. The goal is Germany, and the German military citizen. Whether it is good or bad, it is nevertheless a definite end of education, and the educator has no scruples about omitting that which is irrelevant to his purpose. He has an end to attain and a standard of omissions, neither of which do we seem to possess in the United States.

Perhaps no better illustration of the uniformity of the German system can be given than will be seen when the average percentage of total time devoted to each subject in the general laws prescribed by the central government of Prussia (see Table XLIV.) is compared with the actual practice as shown in the average percentages of total time allotted to each subject in ten progressive cities of the different states (Table LVI.). In Table XLIV. religion occupies 14.5 per cent of total recitation time, language 32 per cent, arithmetic 14.5 per cent. In Table LVI. religion occupies 14 per cent, language 34.2 per cent, arithmetic 17.2 per cent. This uniformity is seen by a more just comparison if the percentages of the state assignments are compared individually with the specific cities which are situated within that state. As an example, religion in the Prussian "regulation" (Table XLIV.) receives 14.5 per cent of the total time allotment; Table LVI. shows that the percentages for this subject for the cities within that kingdom are as follows: Berlin, 13.3 per cent; Königsberg, 14.7 percent; Göttingen, 13.4 per cent; Wiesbaden, 13.9 per cent. In brief, there is scarcely more than a variation of one per cent from the State requirement. Calculations as to other subjects may be made from the same tables to corroborate this conclusion as to the uniformity in different cities.

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It must be remembered, however, that while a city will rarely give less weekly recitation time than is prescribed in the State law, yet sometimes it will distribute the time somewhat differently in order to allow a larger portion of time to subjects of more importance to the environment of the particular city. Munich and Würzburg devote less time to language than is prescribed in the law for Bavaria, but these two cities devote more time to arithmetic than any other cities of the ten. This suggests also that the general laws are sometimes more flexible than we are accustomed to think. By special act of legislature, Bavaria and some other states frequently allow certain provinces to differentiate their curricula.

It is reasonable to suppose that there are advantages in this complete uniformity in the courses of study. In America it is always easier to get a new subject introduced into the curriculum than it is to get it out. Perhaps such a system as the German, prescribing and controlling its courses of study from one central source, might have kept our curriculum free from its present inflation had it been in vogue in America some years ago. That educators of other countries recognize this virtue in the German and French bureaucratic system may be seen from the following recent and most concise utterance published by the School Management Committee of the School Board of London,* which appears to give a fair summary of the advantages and disadvantages of such uniformity. In speaking of the indifference of the English government to the lack of uniformity in the subjects of instruction in the elementary schools of London, the Committee remarks:

“There is no provision for a common standard to be obtained in the subjects in different schools, and, with very slight exception, there is no allotment of the time to be given to the various subjects of instruction. Nothing surprises a German

*Page 17 of the Report for 1902.

or a Frenchman more than to learn that in our elementary schools the relative time and attention to be given the various subjects of instruction is practically within the power of the Head Teacher; and there is but little doubt that many educational experts in both France and Germany today are desirous of relaxing the rigidity of their systems. But, if iron-bound time-table regulations issued by central authority have disadvantages, there is one marked advantage which such a method possesses. If official allotment of time prevails, it is not possible, without due consideration, to introduce new subjects and trust to the manipulative dexterity of the teacher to somehow get them included in an already well-filled time-table."

This does, however, omit one or two suggestions which might be of interest to the American educator. It would seem to be true that education in Germany is more of a national consideration than with us. All the pedagogical expressions which reach us indicate a more deep-felt interest and a more thorough knowledge of actual educational policy and practice among the leaders, the statesmen and the educators among the Germans, than is found among the English or the Americans. As a system for the training of a large group of national educational experts, this German uniform system has no equal among the civilized people of the world, unless it be in France. From the first day the child enters the Volksschule, both by the arrangement of subject matter in the curriculum and by the arrangement of the topics within each subject, his attention is directed towards the central authority and the national welfare. In consequence, he grows up to respect the national government. When he reaches manhood, he is quite willing as a citizen to contribute to the perfection of the organization established by the State which to his mind has proven its efficiency in the intellectual and moral training of the children of the Empire.

Another advantage of the uniform system is brought up

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TABLE XLV.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given to Each Subject in the Public Elementary Schools of Berlin, Prussia.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|----------------------|------|------|-------|-------|-------|-------|-------|-------|------|
| 1 Religion | 180 | 180 | 180 | 240 | 240 | 240 | 240 | 240 | 13.3 |
| 3 Writing | | 120 | 120 | 120 | 120 | 60 | 60 | 60 | 5 |
| 6 Language | 480 | 420 | 420 | 360 | 360 | 360 | 360 | 360 | 23.8 |
| 8 Arithmetic | 240 | 240 | 240 | 240 | 240 | 240 | (120) | (120) | 14.6 |
| Geometry | | | | | | (0) | (120) | (120) | |
| 9 Geography | | | | 120 | 120 | 120 | 120 | 120 | 4 |
| 10 History | | | | 120 | 120 | 120 | 120 | 120 | 4.5 |
| 12 Object Lessons | 120 | 120 | 120 | | | | | | |
| 14 Nature Study | | | | 120 | 120 | 240 | (180) | 180 | 9.6 |
| 16 Physical Training | 120 | 120 | (60) | 120 | 120 | 120 | 120 | 120 | 7.3 |
| 17 Drawing | | 60 | (60) | 120 | 120 | 120 | 120 | 120 | 6 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | 120 | 120 | 120 | 6.4 |
| 20 Needle-work | | | (120) | (120) | (120) | (180) | (240) | (240) | (8) |
| Total | 1200 | 1320 | 1440 | 1680 | 1680 | 1920 | 1920 | 1920 | |

¹Language includes composition, grammar, literature, dictation, reading and recitation of poetry in all tables of German schools, except when otherwise noted.

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|-------------------------|----|------|-------|-------|-------|-------|--------|--------|--|
| 1 Religion | 15 | 13.5 | 12.5 | 14.3 | 14.3 | 12.5 | 12.5 | 12.5 | |
| 3 Writing | | 9 | 8.3 | 7.1 | 7.1 | 3.1 | 3.1 | 3.1 | |
| 6 Language | 40 | 33 | 30 | 21.5 | 21.5 | 18.3 | 18.3 | 18.3 | |
| 8 Arithmetic | 20 | 18 | 16.6 | 14.3 | 14.3 | 12.5 | 12.5 | 12.5 | |
| Geometry | | | | | | 9.3 | 9.3 | 9.3 | |
| 9 Geography | | | | 7.1 | 7.1 | 6.25 | 6.25 | 6.25 | |
| 10 History | | | | 7.1 | 7.1 | 6.25 | 6.25 | 6.25 | |
| 12 Object Lessons, etc. | 10 | 9 | 8.3 | 7.1 | 7.1 | 12.5 | 12.5 | 9.3 | |
| 16 Physical Training | 10 | 9 | 8.3 | 7.1 | 7.1 | 6.25 | 6.25 | 6.25 | |
| 17 Drawing | | 4.5 | 8.3 | 7.1 | 7.1 | 6.25 | 6.25 | 6.25 | |
| 18 Singing | 5 | 4.5 | 8.3 | 7.1 | 7.1 | 6.25 | 6.25 | 6.25 | |
| 20 Needle-work | | | (8.3) | (7.1) | (7.1) | (9.3) | (12.5) | (12.5) | |

¹Language includes composition, grammar, literature, dictation, reading and recitation of poetry in all tables of German schools, except when otherwise noted.

for our consideration when we remember that in America, if a pupil is so unfortunate as to move from one State to another, or even from one city to another in the same State, it generally means an immense loss of time and frequently discontinuance

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TABLE XLVI.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given to Each Subject in the Public Elementary Schools of Königsburg, Prussia.

| Grade. | I. | II. | III. | IV. | V. | VI. | Pct. |
|-----------------|------|------|----------------|----------------|--------|--------|--------|
| 1 Religion | 240 | 240 | 240 | 240 | 240 | 240 | 14.7 |
| 6 Language | 660 | 660 | 480 | 480 | 480 | 480 | 32.1 |
| 8 Arithmetic | 240 | 240 | 240 | 240 | 240 | 240 | 14.7 |
| Geometry | | | | | 120(0) | 120(0) | (3.67) |
| 9 Geography | | | 120 | 120 | 120 | 120 | 5.5 |
| 10 History | | | 120 | 120 | 120 | 120 | 5.5 |
| 14 Nature Study | | | 120 | 120 | 120 | 120 | 5.5 |
| 16 Gymnastics | | | 120(0) | 120(0) | 120(0) | 120(0) | 5.5 |
| 17 Drawing | | 60 | 120 | 120 | 120 | 120 | 6 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | 120 | 6.88 |
| 20 Needle-work | | | (240) | (240) | (240) | (240) | |
| Total | 1200 | 1260 | 1680 (1800) | 1680 (1800) | 1800 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | |
|-----------------|------|------|--------|--------|--------|--------|--|
| 1 Religion | 20.1 | 19.1 | 14.3 | 14.3 | 13.4 | 13.4 | |
| 6 Language | 55.1 | 52.4 | 28.6 | 28.6 | 26.7 | 26.7 | |
| 8 Arithmetic | 20.1 | 19.1 | 14.3 | 14.3 | 13.4 | 13.4 | |
| Geometry | | | | | 6.7 | 6.7 | |
| 9 Geography | | | 7.2 | 7.2 | 6.67 | 6.67 | |
| 10 History | | | 7.2 | 7.2 | 6.67 | 6.67 | |
| 14 Nature Study | | | 7.2 | 7.2 | 6.67 | 6.67 | |
| 16 Gymnastics | | | 7.2 | 7.2 | 6.67 | 6.67 | |
| 17 Drawing | | 4.8 | 7.2 | 7.2 | 6.67 | 6.67 | |
| 18 Singing | 5 | 4.8 | 7.2 | 7.2 | 6.67 | 6.67 | |
| 20 Needle-work | | | (13.7) | (13.7) | (13.7) | (13.7) | |

of his education. The child going from the fifth grade in the schools of one town is as likely when he enters the next town to be placed in the fourth or sixth grade as in the fifth. No such thing is known in Germany. "While each German state manages its own affairs and has its own peculiarities, all agree upon the general educational policy. Therefore, work, whether done in the common school, the teachers' seminary, the gymnasium or the University of the German state, is fully recognized in all the other states throughout the Empire, and children or students may change their school without loss of time."* Without a bureaucratic system this

* "The German School System," Seeley, p. 243.

TABLE XLVII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Weisbaden, Prussia.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------|
| 1 Religion | 120 | 180 | 180 | 240 | 240 | 240 | 240 | 240 | 18.8 |
| 6 Language | 600 | 640 | 660 | 600 | 600 | 600 | 640 | 640 | 39.2 |
| 8 Arithmetic | 180 | 240 | 240 | 240 | 240 | 240 | 240 | 240 | 15.3 |
| 9 Geometry | 180 | 180 | 180 | 180 | 120 | 120 | 120 | 120 | 2.46 |
| 10 History | | | | | 120 | 120 | 120 | 120 | 8.84 |
| 14 Nature Study | | | | | 120 | 120 | 120 | 120 | 8.84 |
| 16 Gymnastics | | | | | 120 | 120 | 120 | 120 | 8.84 |
| 17 Drawing | | | | | 120 | 120 | 120 | 120 | 1.8 |
| 18 Singing | | | | | 120 | 120 | 120 | 120 | 6.41 |
| 20 Needle-work | | | | | 120 | 120 | 120 | 120 | 10.6 |
| Total | 1080 | 1140 (1260) | 1320 (1500) | 1440 (1560) | 1680 (1920) | 1740 (1800) | 1860 (1980) | 1860 (1920) | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|-----------------|------|-------|--------|--------|--------|--------|--------|-------|--|
| 1 Religion | 11.2 | 15.8 | 13.7 | 16.7 | 14.3 | 13.8 | 13 | 13 | |
| 6 Language | 55.6 | 47.4 | 50 | 45.9 | 35.7 | 34.5 | 29 | 29 | |
| 8 Arithmetic | 16.7 | 21.1 | 18.2 | 16.7 | 14.3 | 13.8 | 13 | 13 | |
| 9 Geometry | | | | | | 3.5 | 6.5 | 6.5 | |
| 10 History | 16.7 | 15.8 | 13.7 | 12.5 | 7.2 | 6.9 | 6.5 | 6.5 | |
| 14 Nature Study | | | | | 7.2 | 6.9 | 6.5 | 6.5 | |
| 16 Gymnastics | | | | | 7.2 | 6.9 | 6.5 | 6.5 | |
| 17 Drawing | | | | | 7.2 | 6.9 | 6.5 | 6.5 | |
| 18 Singing | | | 4.6 | 8.4 | 7.2 | 6.9 | 6.5 | 6.5 | |
| 20 Needle-work | | (9.6) | (12.6) | (11.1) | (12.5) | (12.1) | (12.1) | (9.4) | |

TABLE XLVIII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given Each Subject in Public Elementary Schools of Göttingen, Prussia.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|------------------------------|-------|--------|------------------|------------------|------------------|------------------|------------------|-------|--------|
| 1 Religion | 180 | 240 | 240 | 240 ^a | 240 ^a | 240 ^a | 240 ^a | | 13.4 |
| 2 Reading | 330 | 300 | 300 | 180 | 120 | 120 | 180 | | 12.3 |
| 3 Writing | 330 | 240 | 180 | 120 | 120 | 120 | 60 | | 9 |
| 4 Dictation | | | 60 | 60 | 60 | 60 | 60 | | 2.6 |
| 6 Language | | | 60 | 120 ^a | 180 ^a | 180 ^a | 180 ^a | | 6.48 |
| 8 Arithmetic | 300 | 300 | 240 | 240 | 240 | 240 | 240 | | 14.7 |
| Geometry | | | | | | 120 | 120 | | 2.6 |
| 9 Geography | | | 120 ^a | 120 | 120 | 120 | 120 | | 6.18 |
| 10 History | | | 60 | 120 | 120 | 120 | 120 | | 4.76 |
| 12 Object Lessons | 120 | 120 | | | | 120 ^a | 120 ^a | | 4.32 |
| 14 Nature Study ^a | | | 60 | 120 | 120 | 120 | 120 | | 4.76 |
| | | | (0) | (0) | (0) | (0) | (0) | | 8.64 |
| 16 Gymnastics ^c | | | 120 | 120 | 120 | 120 | 120 | | 5.61 |
| 17 Drawing | | 60 | 120 | 120 | 120 | 120 | 120 | | 6 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | 120 | 120 | | 6 |
| 20 Sewing | (120) | (120) | (240) | (240) | (240) | (240) | (240) | | (11.4) |
| Total | 1320 | 1320 | 1680 | 1680 | 1800 | 2040 | 2040 | | |
| | | (1380) | (1800) | (1800) | (1740) | (1860) | (1920) | | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-------------------|------|------|------|------|------|------|------|--|
| 1 Religion | 13.7 | 18.2 | 14.3 | 14.3 | 13.4 | 11.8 | 11.8 | |
| 2 Reading | 25 | 22.8 | 17.9 | 10.7 | 6.67 | 5.9 | 8.8 | |
| 3 Writing | 25 | 18.2 | 10.7 | 7.2 | 6.67 | 5.9 | 3 | |
| 4 Dictation | | | 3.6 | 3.6 | 3.34 | 3 | 3 | |
| 6 Language | | | 3.6 | 7.2 | 10 | 8.8 | 8.8 | |
| 8 Arithmetic | 22.8 | 22.8 | 14.3 | 14.3 | 13.4 | 11.8 | 11.8 | |
| Geometry | | | | | | 5.9 | 5.9 | |
| 9 Geography | | | 7.2 | 7.2 | 6.67 | 5.9 | 5.9 | |
| 10 History | | | 3.6 | 7.2 | 6.67 | 5.9 | 5.9 | |
| 12 Object Lessons | 9.1 | 9.1 | | | | 5.9 | 5.9 | |
| 14 Nature Study | | | 3.6 | 3.6 | 6.67 | 5.9 | 5.9 | |
| 16 Gymnastics | | | 7.2 | 7.2 | 13.4 | 11.8 | 11.8 | |
| 17 Drawing | | 4.6 | 7.2 | 7.2 | 6.67 | 5.9 | 5.9 | |
| 20 Needle-work | | 8.7 | 13.7 | 13.7 | 13.8 | 13 | 12.5 | |

^a Home Geography. ^b Includes physiology. ^c Bible stories or Bible history. ^d Includes 1 hour of composition. ^e Includes 1 hour of catechism. ^f Includes 2 hours of catechism. ^g Includes 2 hours of after-school organized games. ^h Elementary physics.

TABLE XLIX.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Hamburg, Prussia.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1 Religion | 120 | 120 | 120 | 180 | 180 | 120 | 120 | | 7.5 |
| 6 Language | 180 | 780 | 600 | 600 | 420 | 860 | 360 | | 30 |
| | (240) | (240) | (240) | (180) | | (180) | | | |
| 8 Arithmetic | 300 | 300 | 300 | 300 | 240 | 240 | 240 | | 15 |
| Geometry | | | | 60 | 120 | 120 | 120 | | 3.75 |
| 9 Geography | | | 120 | 120 | 120 | 120 | 120 | | 6 |
| 10 History | | | 60 | 120 | 120 | 120 | 120 | | 4.6 |
| 14 Nature Study | | | 120 | 120 | 120 | 240 | (180) | | 8.34 |
| 16 Gymnastics | (0) | (0) | (0) | 120 | 120 | 120 | 120 | | 6.67 |
| 17 Drawing | 120 | 120 | 120 | 120 | 120 | 120 | (180) | | 6.67 |
| | (60) | (60) | (60) | 120 | 80 | 60 | 60 | | |
| 18 Singing | 120 | 120 | 120 | 120 | (120) | (120) | (120) | | 6.67 |
| 20 Sewing | (240) | (240) | (240) | (360) | (360) | (360) | (360) | | 18.2 |
| 23 English | | | | | (0) | (0) | (0) | | 7.5 |
| Total | 1560 | 1560 | 1680 | 1920 | 1920 | 1920 | 1920 | | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | 7.7 | 7.7 | 7.2 | 9.4 | 9.4 | 6.3 | 6.3 | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--|
| 1 Religion | 7.7 | 7.7 | 7.2 | 9.4 | 9.4 | 6.3 | 6.3 | |
| 6 Language | 50 | 50 | 35.8 | 34.4 | 21.9 | 18.8 | 18.8 | |
| 8 Arithmetic | 19.2 | 19.2 | 17.9 | 15.7 | 12.5 | 12.5 | 12.5 | |
| Geometry | | | 7.2 | 8.1 | 6.3 | 6.3 | 6.3 | |
| 9 Geography | | | 7.2 | 6.3 | 6.3 | 6.3 | 6.3 | |
| 10 History | | | 3.6 | 6.3 | 6.3 | 6.3 | 6.3 | |
| 14 Nature Study | | | 7.2 | 6.3 | 6.3 | 12.5 | 15.6 | |
| 16 Gymnastics | 7.7 | 7.7 | 7.2 | 6.3 | 6.3 | 6.3 | 6.3 | |
| 17 Drawing | 7.7 | 7.7 | 7.2 | 6.3 | 6.3 | 6.3 | 6.3 | |
| 18 Singing | 7.7 | 7.7 | 7.2 | 6.3 | 3.1 | 3.1 | 3.1 | |
| 20 Needle-work | (15.4) | (15.4) | (14.3) | (18.8) | (18.8) | (18.8) | (18.8) | |
| 23 English | | | | | 15.6 | 15.6 | 12.5 | |

TABLE L.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Dresden, Saxony.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|----------------|-----|---------------|----------------|-------|----------------|----------------|-------|-------|--------|
| 1 Religion | 180 | 180 | 180 | 180 | 240 | 240 | 240 | 240 | 13.97 |
| 6 Language | 300 | 300 | 600 | 540 | 540 | 480 | 420 | 240 | 31.4 |
| 8 Arithmetic | 240 | 240 | 240 | 240 | 240 | 240 | (180) | (180) | |
| Geometry | | | | | | 60 | 120 | 240 | 16.3 |
| 9 Geography | 160 | 120 | 120 | 240 | 240 | 240 | 300 | 300 | 14.6 |
| 10 History | | | | | (60) | 120 | 120 | 120 | 4.7 |
| 16 Gymnastics | | | | (0) | 120 | 120 | 120 | 120 | 6.9 |
| 17 Drawing | | | | 120 | 120 | 120 | 120 | 240 | 6.9 |
| 18 Singing | | | 60 | 120 | 60 | 60 | 120 | 60 | 4.9 |
| 20 Needle-work | | (120) | (240) | (240) | (240) | (240) | (240) | (240) | (13.3) |
| Total | 860 | 820 (1200) | 1200 (1440) | 1440 | 1680 (1800) | 1680 (1800) | 1800 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | | |
|----------------|------|------|--------|--------|--------|--------|--------|--------|--|
| 1 Religion | 18.7 | 19.6 | 16 | 12.5 | 14.3 | 14.3 | 13.4 | 13.4 | |
| 6 Language | 35 | 36.7 | 50 | 37.5 | 32.2 | 28.6 | 23.4 | 20 | |
| 8 Arithmetic | 28 | 29.3 | 20 | 18.7 | 14.3 | 14.3 | 13.4 | 13.4 | |
| Geometry | | | | | | 8.6 | 6.7 | 6.7 | |
| 9 Geography | 18.9 | 14.7 | 10 | 16.7 | 14.3 | 14.3 | 16.7 | 16.7 | |
| 10 History | | | | | 7.2 | 7.2 | 6.7 | 6.7 | |
| 16 Gymnastics | | | | 8.4 | 7.2 | 7.2 | 6.7 | 6.7 | |
| 17 Drawing | | | | | 7.2 | 7.2 | 6.7 | 13.4 | |
| 18 Singing | | | 5 | 8.4 | 8.6 | 8.6 | 6.7 | 8.4 | |
| 20 Needle-work | | (10) | (16.7) | (16.7) | (13.4) | (13.4) | (13.4) | (13.4) | |

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TABLE LI.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given to Each Subject in the Public Elementary Schools of Munich, Bavaria.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | Pct. |
|-------------------|--------|--------|--------------|--------------|------------|--------------|--------------|--------|
| 1 Religion | 120 | 120 | 180 | 180 | 180 | 180 | 120 | 9.75 |
| 6 Language | 680 | 720 | (600) 720 | (600) 720 | 480 | 480 | 480 | 38.5 |
| 8 Arithmetic | 360 | 360 | 360 | 360 | 360 | 360 | 360 | 22.8 |
| 9 Geography | | | | | (60) 90 | 90 | (180) 120 | 3.8 |
| 10 History | | | | | (60) 90 | 90 | 120 | 3.8 |
| 12 Object Lessons | | | 120 | 120 | 120 | (180) 240 | (180) 240 | 5.41 |
| 16 Gymnastics | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 7.57 |
| 17 Drawing | | | | | 240 | 180 | 180 | 5.4 |
| 18 Singing | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 3.8 |
| 20 Needle-work | (120) | (120) | (180) | (180) | (240) | (180) | (240) | (11.1) |
| Total | 1260 | 1380 | 1560 | 1560 | 1740 | 1800 | 1800 | |
| Total | (1380) | (1300) | (1620) | (1620) | | | | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-------------------|-------|------|--------|--------|--------|------|--------|--|
| 1 Religion | 9.6 | 8.7 | 11.6 | 11.6 | 10.4 | 10 | 6.7 | |
| 6 Language | 47.6 | 52.2 | 46.2 | 46.2 | 27.6 | 27.1 | 27.1 | |
| 8 Arithmetic | 28.6 | 26.1 | 23.1 | 23.1 | 20.7 | 20 | 20 | |
| 9 Geography | | | | | 5.2 | 5 | 6.7 | |
| 10 History | | | | | 5.2 | 5 | 6.7 | |
| 12 Object Lessons | | | 7.7 | 7.7 | 6.9 | 13.4 | 13.4 | |
| 16 Gymnastics | 9.6 | 8.7 | 7.7 | 7.7 | 6.9 | 6.7 | 6.7 | |
| 17 Drawing | | | | | 13.8 | 10 | 10 | |
| 18 Singing | 4.8 | 4 | 3.9 | 3.9 | 3.5 | 3.34 | 3.34 | |
| 20 Needle-work | (8.7) | (8) | (11.1) | (11.1) | (13.8) | (10) | (13.4) | |

could not happen, for the educational experts of such a country, acting as isolated individuals, would never agree upon "the general educational policy."

5. *Wealth and Poverty of the German Curriculum.*

The WEALTH and the POVERTY of the course of study in the Elementary schools of Germany may be approximately arrived at by a type study of the summaries in Tables XLV.-LIV. Before beginning this study, however, a few explanations are necessary. It will be seen that some of the schools have only six grades and others only seven, although eight

TABLE LII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Würzburg, Bavaria.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|--------|
| 1 Religion | 180 | 180 | 240 | 360 | 360 | 360 | 360 | | 20 |
| 6 Language | 540 | 540 | 480 | 600 | 480 | 480 | 420 | | 34.8 |
| 8 Arithmetic | 240 | 300 | 300 | 300 | 300 | 300 | 300 | | 20 |
| 9 Geography | 180 | 120 | 120 | 60 | 60 | 60 | 90 | | 6.77 |
| 10 History | | | | | 60 | 60 | 90 | | 2.05 |
| 14 Nature Study | | | | 60 | 120 | 120 | 120 | | 4.12 |
| 16 Gymnastics | | | | 120 | 120 | 120 | 120 | | 4.71 |
| 17 Drawing | | | | | (0) | (0) | (0) | | |
| 18 Singing | 60 | 60 | 60 | 60 | 60 | 60 | 60 | | 3.53 |
| 20 Sewing | (120) | (120) | (180) | (180) | (180) | (180) | (180) | | 4.12 |
| Total | 1200 (1320) | 1200 (1320) | 1200 (1380) | 1660 (1680) | 1680 (1740) | 1680 (1740) | 1680 (1740) | | (10.5) |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|-------|-------|--------|--------|--------|--------|--------|-------|------|
| 1 Religion | 15 | 15 | 20 | 23 | 21.4 | 21.4 | 21.4 | | |
| 6 Language | 45 | 45 | 40 | 38.5 | 28.6 | 28.6 | 25 | | |
| 8 Arithmetic | 20 | 25 | 25 | 19.2 | 18 | 18 | 18 | | |
| 9 Geography | 15 | 10 | 10 | 3.9 | 3.6 | 3.6 | 5.35 | | |
| 10 History | | | | | 3.6 | 3.6 | 5.35 | | |
| 14 Nature Study | | | | 3.9 | 7.2 | 7.2 | 7.2 | | |
| 16 Gymnastics | | | | 7.7 | 7.2 | 7.2 | 7.2 | | |
| 17 Drawing | | | | | 7.2 | 7.2 | 7.2 | | |
| 18 Singing | 5 | 5 | 5 | 3.9 | 3.6 | 3.6 | 3.6 | | |
| 20 Needle-work | (8.1) | (8.1) | (13.1) | (10.7) | (10.4) | (10.4) | (10.4) | | |

TABLE LIII.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Stuttgart, Württemberg.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|------|
| 1 Religion | 240 | 270 | 270 | 300 | 360 | 360 | 360 | 240 | 18.6 |
| 6 Language | 600 | 630 | 780 | 570 | 570 | 570 | 570 | 480 | 37 |
| 8 Arithmetic | 180 | 240 | 300 | 300 | 300 | 300 | 300 | 300 | 17.2 |
| 9 Geography | | | | | | | | | |
| 10 History | 120 | 120 | 120 | 240 | 240 | 240 | 240 | 420 | 13.5 |
| 12 Object Lessons | | | | | | | | | |
| 16 Gymnastics | | | | 120 | 120 | 120 | 120 | 120 | 4.65 |
| 17 Drawing | | | | 120 | 120 | 120 | 120 | 120 | 3.72 |
| 18 Singing | 60 | 60 | 90 | 90 | 90 | 90 | 90 | 90 | 4.42 |
| 20 Needle-work | (240) | (240) | (240) | (240) | (240) | (240) | (240) | (120) | (12) |
| Total | 1260 (1440) | 1320 (1660) | 1660 (1860) | 1620 (1860) | 1800 (1920) | 1800 (1920) | 1800 (1920) | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| | | | | | | | | |
|-------------------|--------|--------|--------|------|--------|-------|--------|--------|
| 1 Religion | 20.1 | 20.5 | 17.3 | 18.5 | 20.1 | 20 | 20 | 13.4 |
| 6 Language | 50 | 47.8 | 50 | 35.2 | 31.7 | 31.7 | 31.7 | 36.7 |
| 8 Arithmetic | 16.1 | 18.2 | 19.2 | 18.5 | 16.7 | 16.7 | 16.7 | 16.7 |
| 9 Geography | | | | | | | | |
| 10 History | 10 | 9.1 | 7.7 | 14.8 | 13.4 | 13.4 | 13.4 | 28.4 |
| 12 Object Lessons | | | | | | | | |
| 16 Gymnastics | | | | 7.4 | 6.67 | 6.67 | 6.67 | 6.67 |
| 17 Drawing | | | | | 6.67 | 6.67 | 6.67 | 6.67 |
| 18 Singing | 5 | 4.6 | 5.8 | 5.6 | 5.6 | 5 | 5 | 5 |
| 20 Needle-work | (16.7) | (15.4) | (13.4) | (13) | (12.5) | (9.4) | (12.5) | (6.67) |

TABLE LIV.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and Percentage of Total Time given to Each Subject in the Public Elementary Schools of Karlsruhe, Baden.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|-------|--------------|--------------|--------------|-------------|-------------|--------------|--------------|------|
| 1 Religion | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 11 |
| 6 Language | 540 | (720) 180 | 600 | 600 | 600 | 600 | 600 | (420) 600 | 37.6 |
| 8 Arithmetic | 300 | (300) 360 | (300) 360 | (300) 360 | 300 | 300 | 300 | 300 | 19.7 |
| Geometry | | | | | (0) | (0) | (60) | (60) | |
| 9 Geography | | | 60 | 120 | 120 | 120 | 120 | 120 | 2.75 |
| 10 History | | | | | 60 | 60 | 60 | (60) 120 | 2.31 |
| 14 Nature Study | | | (60) 120 | 60 | 60 | (60) | 60 | 60 | 3.67 |
| 16 Gymnastics | | | | (0) 120 | (0) 120 | (0) 120 | (0) 120 | (0) 120 | 5 |
| 17 Drawing | | 60 | 60 | 120 | (60) 120 | (60) 120 | (120) 180 | (120) 180 | 6.42 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | (60) | (60) | (60) | |
| 20 Needle-work | (240) | (240) | (240) | (240) | (240) | 120 | 120 | 120 | 6.4 |
| Total | 1080 | 1440 | 1500 | 1680 | 1740 | 1800 | 1860 | 1920 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade per Week.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------|-------|--------|--------|--------|--------|--------|--------|-------|------|
| 1 Religion | 16.7 | 12.5 | 12 | 10.7 | 10.4 | 10 | 9.7 | 9.4 | |
| 6 Language | 50 | 54 | 40 | 35.7 | 34.5 | 33.4 | 32.3 | 31.3 | |
| 8 Arithmetic | 27.8 | 25 | 24 | 21.4 | 17.2 | 16.7 | 16.1 | 15.6 | |
| Geometry | | | | | 3.2 | 3.4 | 6.5 | 6.3 | |
| 9 Geography | | | 4 | 7.2 | 6.9 | 6.7 | 6.5 | 6.3 | |
| 10 History | | | | | 8.5 | 8.4 | 8.2 | 8.3 | |
| 14 Nature Study | | | 8 | 3.6 | 3.5 | 3.7 | 3.2 | 3.1 | |
| 16 Gymnastics | | | | 7.2 | 6.9 | 6.7 | 6.5 | 6.3 | |
| 17 Drawing | | 4.2 | 4 | 7.2 | 6.9 | 6.7 | 6.7 | 6.4 | |
| 18 Singing | 5.6 | 4.2 | 8 | 7.2 | 6.9 | 6.7 | 6.5 | 6.3 | |
| 20 Needle-work | (8.2) | (15.4) | (14.8) | (14.3) | (13.8) | (13.4) | (13.4) | (23) | |

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TABLE LV.—Showing the Average Recitation Time in Minutes per Week given to Each Subject in Each Grade in the Ten German Cities.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. |
|-------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 Religion | 172 | 199 | 207 | 234 | 246 | 246 | 234 | 218 |
| 6 Language ¹ | 588 | 603 | 600 | 587 | 513 | 501 | 533 | 472 |
| 8 Arithmetic | 252 | 282 | 282 | 282 | 270 | 270 | 270 | 255 |
| 9 Geography | 58 | 47 | 113 | 115 | 111 | 111 | 134 | 147 |
| 10 History | | | 33 | 60 | 103 | 103 | 110 | 120 |
| 14 Nature Study | | | 80 | 66 | 100 | 140 | 126 | 111 |
| 16 Gymnastics | 54 | 36 | 60 | 108 | 132 | 132 | 132 | 125 |
| 17 Drawing | 12 | 42 | 54 | 60 | 120 | 114 | 137 | 128 |
| 18 Singing | 54 | 54 | 93 | 99 | 93 | 93 | 99 | 90 |
| 20 Handwork | (96) | (132) | (222) | (234) | (258) | (246) | (258) | (278) |
| Geometry | | | | 18 | 42 | 72 | 102 | 112 |
| Total | 1190 | 1263 | 1502 | 1809 | 1730 | 1782 | 1822 | 1785 |

Showing the Average Percentage of Recitation Time given to Each Subject in Each Grade in Ten German Cities.

| | | | | | | | | |
|-----------------|-------|-------|--------|--------|--------|--------|------|--------|
| 1 Religion | 14.5 | 15.8 | 13.8 | 14.6 | 14.2 | 13.8 | 13 | 12.3 |
| 6 Language | 49.4 | 47.8 | 40 | 35.3 | 29.7 | 28.2 | 26.5 | 26.5 |
| 8 Arithmetic | 21.2 | 22.3 | 18.7 | 17.6 | 15.6 | 15.2 | 15.2 | 15.3 |
| 9 Geography | 4.9 | 3.7 | 7.5 | 7.2 | 6.4 | 6.3 | 7.4 | 8.3 |
| 10 History | | | 2.2 | 3.8 | 6 | 5.8 | 6 | 6.8 |
| 14 Nature Study | | | 5.3 | 4 | 5.8 | 7.9 | 7 | 6.2 |
| 16 Gymnastics | 4.6 | 2.8 | 4 | 6.7 | 7.6 | 7.4 | 7.3 | 7.6 |
| 17 Drawing | 1 | 3.3 | 3.6 | 3.8 | 7 | 6.4 | 7.3 | 7.2 |
| 18 Singing | 4.6 | 4.3 | 6.2 | 6.2 | 5.4 | 5.2 | 5.4 | 5 |
| 20 Handwork | (7.8) | (9.3) | (13.6) | (13.5) | (14.2) | (13.4) | (14) | (13.5) |
| Geometry | | | | 1 | 2.4 | 4.1 | 5.6 | 6.5 |

¹ Language includes reading, writing, spelling, literature and composition.

years of compulsory attendance are required by all the States except Bavaria (7) and Würtemberg (7). Munich and Würzburg, then, fulfill the legal requirement by establishing only seven grades. But in the Prussian cities, Königsberg, Wiesbaden, and in Hamburg, compulsory attendance for the extra year is provided for by adding a year to the fifth and sixth grades respectively, if the school is a six grade school, and a year extra to the seventh grade if it is a seven grade school.* This has been included, in calculating the average recitation time and the average percentage of total time, by repeating the fifth and sixth grade columns in the six grade

*Stotsner, p. 16.

TABLE LVI.—Showing the Percentage of Total Time given to Each Subject in Ten German Cities.

| | Berlin. | Königs- burg. | Gott- tingen. | Wies- baden. | Dresden. | Münich. | Wurz- burg. | Stuttgart. | Karls- ruhe. | Hamburg. | Average Pct. |
|-------------------------|---------|------------------|------------------|-----------------|----------|---------|----------------|------------|-----------------|----------|-----------------|
| 1 Religion | 13.3 | 14.7 | 13.4 | 13.8 | 13.9 | 9.7 | 20 | 18.6 | 11 | 7.5 | 14 |
| 6 Language ¹ | 28.8 | 32.1 | 33.6 | 39 | 31.4 | 38.5 | 34.8 | 37 | 37.6 | 30 | 34.2 |
| 8 Arithmetic | 14.6 | 14.7 | 14.7 | 15.3 | 16.3 | 22.8 | 20 | 17 | 19.7 | 15.5 | 17.2 |
| 9 Geography | 4.5 | 5.5 | 5.1 | 9.8 | 14.6 | 3.8 | 6.7 | 13.6* | 5 | 5 | 6.6 |
| 10 History | 4.5 | 5.5 | 4.7 | 3.9 | 4.7 | 3.8 | 2.6 | | 2.3 | 4.6 | 4.2 |
| 12 Object Lessons | | | 4.3 | | | 5.4 | | | | | |
| 14 Nature Study | 9.6 | 5.5 | 4.5 | 3.9 | | | 4.1 | | 3.6 | 8.3 | 5 |
| 16 Gymnastics | 7.3 | 5.5 | 8.6 | 3.9 | 5.9 | 7.5 | 4.7 | 4.6 | 5 | 6.1 | 6.2 |
| 17 Drawing | 6 | 6 | 5.6 | 1.8 | 5.6 | 5.4 | 3.5 | 3.7 | 6.4 | 6.6 | 5.2 |
| 18 Singing | 6.4 | 6.8 | 6 | 5.4 | 4.9 | 3.8 | 4.1 | 4.4 | 6.4 | 6.1 | 5.8 |
| 20 Hand-work for Girls | (8) | (11) | (11.4) | (10.6) | (13.3) | (11) | (10.5) | (12) | (16) | (18.2) | (13) |
| Geometry | 4 | 3.6 | 2.6 | 2.4 | 2.9 | | | | 2.7 | 3.4 | 2.7 |
| English | | | | | | | | | | 7.5 | |

¹ Language includes reading, writing, spelling, grammar and composition.

* Includes history, object lessons and nature study.

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schools and the seventh grade column in the seven grade schools. This is what the pupil in their schools actually does.

There is a rigidity about a course of study which provides the same time allotments year after year in the child's school life. This is the case with all the German schools, but most especially with those which repeat the previous year's allotments, as in the six and seven grade schools with eight year compulsory requirements. This makes one suspect the curriculum of considerable poverty and mechanical dryness. At the very outset one is impressed by the fact that there are actually fewer subjects of instruction in the German program than are found in those of England, France or America. Michael E. Sadler recently called attention to this difference development, while in America it is especially in the primary education which has shown the least capacity for fruitful development, while in America it is especially in the primary school that the keenest sensitiveness to suggestion, and the greatest progressiveness have been found.* The absence of any time assignments to certain staple subjects in the first two grades is indicative of a poverty of thought material not found in the most representative of the American schools. The German tables show little time allotment in the primary grades to the emotional and æsthetic aspects of the child's experience.

One other caution must be kept in mind in studying these tables. In Germany relative percentage of time varies in regular ratio to actual time because of the uniformity of the system. In Tables XLV.-LIV. it is seen Berlin devotes the smallest percentage of relative time and the smallest amount of actual time in minutes per week to arithmetic. Munich devotes the largest percentage of relative time and the largest amount of actual time to that subject. But this is not the case in the American system. New York devotes the smallest

*Special Reports on Educational Subjects, Michael E. Sadler, Vol. II., p. 436.

relative, but Kansas City gives less actual time. Likewise Jersey City gives the largest relative time to the subject of arithmetic, while Chicago actually gives more minutes per week to that subject. This seems to corroborate the opinion which the author* of the "Course of Study for Elementary Schools" (p. 24) expressed some years ago, to the effect that such differences in America are to be accounted for largely by the indifference upon the part of some school officials to the highest ends of education and to a proper adjustment of the subjects to be taught.

6. *Conservatism and Changes in Forty Years.*

German conservatism and suspicion of the "fads and frills" of the course of study are rather characteristic. A comparison of the courses of study outlined in these pages (see Tables I.-XIII. and XLIV.-LVI.) does not only show that there are fewer subjects taught in their elementary schools, but that a considerably larger portion of time is allotted to the "three R's" than elsewhere. Manual training for boys is noticeable for its absence from the course of study in all of the German states and cities; domestic science is not much more popular. New studies have had a severe struggle to gain their part of the recitation time. In fact, the Germans are exceptionally slow in making any change at all in the curriculum. The United States Commissioner of Education (in a letter dated Jan. 7, 1904) is authority for the statement that "The courses of study for the schools of German cities remain practically as they were in 1894-5." The statement is corroborated and this date still further removed in a letter received by the writer from the Minister of Education of Prussia (under date of Feb. 19, 1904) in which he says the courses of study in Prussia today follow the "Regulations" (Allgemeine-Bestimmungen) of Minister Falk issued October

*J. T. Prince.

TABLE LVII.—Continued.

| Grade. | 1893 | | | | | | 1901 | | | | | |
|----------------------|------|------|-------|--------|--------|-------|------|------|-------|--------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Religion | 240 | 240 | 240 | 240 | 240 | 240 | 180 | 240 | 240 | 240 | 240 | 240 |
| 2 Reading | a | a | a | a | a | a | a | a | a | a | a | a |
| 3 Writing | a | a | a | a | a | a | a | a | a | a | a | a |
| 4 Spelling | | | | | | | | | | | | |
| 6 Language | 540 | 420 | 600 | 480 | 480 | 480 | 600 | 640 | 600 | 480 | 480 | 480 |
| 8 Arithmetic | 240 | 240 | 240 | 240 | 240 | (360) | 180 | 240 | 240 | 240 | 240 | 240 |
| 9 Geography | | | d | 120 | 120 | 120 | | | d | 120 | 120 | 120 |
| 10 History | | | | 120 | 120 | 120 | | | | 120 | 120 | 120 |
| 14 Nature Study (c) | 120 | 120 | (0) | 120 | 120 | 180 | | | 120 | 120 | 120 | 180 |
| 12 Object Lessons | | | | | | | | | | | | |
| 16 Physical Training | 120 | 120 | 120 | 120 | 120 | 120 | 300 | 120 | 120 | 120 | 120 | 120 |
| 17 Drawing | 120 | 120 | 120 | 120 | 120 | 120 | | 120 | 120 | 120 | 120 | 120 |
| 18 Singing | 60 | 60 | 120 | 120 | 120 | 120 | 60 | 60 | 120 | 120 | 120 | 120 |
| 20 Sewing | | | (240) | (240) | (360) | (360) | | | (240) | (240) | (360) | (360) |
| Geometry | | | | 120 | 180 | 180 | | | | 120 | 120 | 180 |
| | | | | (0) | (0) | (0) | | | | (0) | (0) | (0) |
| Total | 1820 | 1820 | 1680 | 1800 | 1800 | 1920 | 1820 | 1820 | 1680 | 1800 | 1800 | 1920 |
| | | | | (1920) | (1920) | | | | | (1920) | (1920) | |

(This table is made for the years 1840, 1860, 1878, 1893 from the U. S. Commissioner's Report for 1893-94, p. 2951; for the year 1901 from Dr. Paul Stötzner's "Das öffentliche Unterrichtswesen Deutschlands in der Gegenwart.")

a Included with language.

b Included with geometry.

c Physics in Grade VI.

d Home geography in Grade III.

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15, 1872. In order to show this static condition of the German curriculum a little more in detail, a type study has been made of the public elementary schools of Berlin. (See Table LVII.)

During the forty-one years from 1860 to 1901, only two subjects were introduced into the Berlin course of study, viz., geography and gymnastics; and since 1873 there has not been a single subject dropped or added. It would be interesting to know if as much could be said of any American city during the last five years. The only changes in the time allotment of the Berlin schools since 1873 are seen in the following summary made from Table LVII.

| LOSSES (per week) | | GAINS (per week) | |
|--------------------------------|-------|-----------------------|-------|
| | Hour. | | Hour. |
| Grade I.—Religion, | 1 | | |
| Arithmetic, | 1 | | |
| Singing, | 1 | | |
| Object Lessons, | 2 | Gymnastics, | 5 |
| Grade II.—Language, | 1 | Gymnastics, | 2 |
| Singing, | 1 | Drawing, | 2 |
| Object Lessons, | 2 | | |
| Grade III.—Handwork for girls, | 4 | Nature Study, | 2 |
| | | Gymnastics, | 2 |
| Grade IV.—Language, | 2 | Gymnastics, | 2 |
| Handwork for girls, | 4 | History, | 2 |
| Drawing, | 2 | Geometry, | 2 |
| Grade V.—Handwork for girls, | 2 | Gymnastics for girls, | 2 |
| Grade VI.—Handwork for girls, | 2 | Gymnastics for girls, | 2 |

The losses by both boys and girls are religion, one hour; arithmetic, one hour; singing, two hours; object lessons, four hours; language, three hours. The loss by girls alone is handwork, twelve hours, which is replaced by ten hours of gymnastics and two hours of nature study. The gains by both boys and girls have been twelve hours of gymnastics and two of history, while the boys alone gained two hours of geometry.

The main tendencies of growth in the Berlin curriculum in these thirty years have been in the abandoning of nature study in the first two grades, the increase of gymnastics for boys and the admission of girls to gymnastics. The decrease of handwork for girls is not important, because that subject is still left with a normal amount of time.

7. *Physical Education actually Provided for.*

The one interesting feature of this development of the Berlin curriculum has been that it shows that for the past thirty-one years the city has been attempting to provide adequate physical exercise for boys. It is rather remarkable that for thirty years this city should have provided more time upon its program for caring for the health of its pupils than is found in the year 1904 in the courses of study of eight out of the ten representative American cities chosen for this study. (See Tables II.-XI.) When we compare the American average allotment, Table XIII., and the German, Table LVI., seven of the German cities are seen to devote approximately 6 per cent and the other three approximately 4 per cent of their total assigned time to the care of the health of the child by means of systematic physical training; whereas, on the contrary, of the seven American cities which devote any time to the subject at all, only two give as much as 6 per cent of the time, the other five approximating 3 per cent, which is less than the three lowest German cities. In this comparison it must be remembered that the percentage of total time in Germany means much more than it does in America, because as has already been shown there is more actual time. To make this comparison does no injustice to America because of any fallacy of accidental selection of either of the two groups of cities selected for study. To prove this it is only necessary to refer to Table I., made up of fifty American cities, among which are certainly nearly all of those approximating in pop-

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ulation the ten German cities. It may be noticed that not more than 4 per cent of these fifty cities make any provision at all upon their programs for the physical training of the child. How far this percentage is from applying to the school children in Germany, a glance at the legal requirements, as tabulated in Table XLIV., will readily show. In this table it appears that physical culture is offered to more than two-thirds of the children of the Empire. It may be that this helps to answer the assertion that the German child is able to endure a heavier mental tax than the American child.

One phase of the question of physical culture in the German school is difficult for the American to appreciate. By referring to Tables XLV. to LIV. one will find to his surprise how many of the courses of study provide physical training for boys and *not for girls*. It is true that the girls have hand-work in its stead, but it is hardly conceivable that sewing, or even cooking in the one instance given, could be classified among those physical activities which contribute to the training of the bodily organism. The discrimination against the girls is further emphasized by referring to the total recitation time in each grade per week. If one can assume that an increase of recitation time implies an increase of work, then the girls are actually required to do more work in school than the boys in the thirty-nine out of the forty-five grades in these ten cities which require a difference of recitation time for girls and boys.

8. *Language.*

The contention is made in connection with this study that in the main the relative percentage of the time devoted to a subject indicates the relative importance attached to that subject. To the counter proposal that such would indicate only the difficulty of the subject, it is cited that mathematics is undoubt-

edly more difficult than reading or language, and yet mathematics invariably receives less recitation time.

According to this time criterion, language is regarded as the most important subject in the German curriculum. Indeed, German education is, more than that of any other nation of the world, based upon linguistic studies.

The prominence given in America to manual training and those exercises which have to do with humane education produces a system which is the antithesis of all that is typically German. We look to human life for a determination of our standards of worth. The German will perhaps claim to do the same thing, but his regard is more for the forms of culture derived from the civilization of the past than for those founded on the activities of the present. How much he is still "haunted by the ghost of 'general culture'" is shown particularly in the study of language. Of course this appears more conspicuously in the study of the curricula of the secondary school than in those of the elementary, but even in the latter the excessive time allotment to language is significant.

In considering the subject of language, we may exclude the study of spelling, which is an unnecessary evil in a composite language like the German (it is practically forbidden by law in Germany), and include reading, writing and perhaps three-fourths of the time devoted to the study of religion, since this latter study practically takes the place of much work in language and literature which would otherwise be required. Considering it thus, we may safely say that an average of 40 per cent of the total assigned recitation time in the ten cities, as shown in Table LVI., is given to language alone. This statement must be supplemented by the fact that teachers are given specific instructions to make every recitation one in language. In several of the grades, over thirteen hours per week are assigned to language alone. Königsberg leads in

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the prominence attached to language in any one grade; 55.1 per cent of the time in its first grade, and 52.4 per cent in the second, are given to this one study.

The different subjects included under language are reading, writing, composition, literature and grammar, dictation and object lessons (*Anschauungunterricht*). Object lessons are taught and used as subjects of oral composition in the earlier grades only. Reading and oral composition are taken almost wholly from historical biography or national literature. Much time is saved in reading by insisting that the reading matter shall have worth in itself and bear upon other subjects of instruction. The amount of reading matter covered in the average Prussian school is very small and cannot be compared with that read in the American. Frequently a book of five hundred pages lasts a pupil six years. Cases are quoted in which the child reads only sixteen octavo pages in the first year, and this, too, in a good school.* The German has a strenuous idea of thoroughness which will not admit of his covering a vast number of pages in reading lessons, as his American neighbor does. The possibility of causing fatigue and destroying the interest of his pupil seems not to annoy the German pedagogue.

9. *Religion.*

Religion is a subject of which the American educator claims to have too little in his elementary schools and the German, on the other hand, too much. It has already been shown that this subject is largely responsible for the larger weekly recitation time found in the German schools. It has been suggested that want of time is no excuse for the absence of that subject from the American curriculum. Various opinions regarding the importance of this subject are shown in the German tables, but all agree in allowing it almost as much time as they do

*Special Reports on Educational Subjects, Sadler, Vol. IX., p. 318.

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arithmetic. Table LVII. shows that since 1840 there has been a steady decrease of time for religion in the Berlin schools. In Württemberg, where the subject receives by law eight hours and forty minutes a week, a fierce fight is raging between progressive educators and the clergy, who in all Germany have considerable voice in educational affairs. Certain cities, such as Stuttgart, seem by some device to have escaped the official requirements. But even after the subject receives only its normal allotment, there will always remain a large amount of time devoted to it, for the Germans are essentially a religious people.

Practically all the elementary schools of Germany are religious schools, though not under the control of the church.¹ In the truest sense of the word, this is the case in Prussia, in which State every elementary school, with a few exceptions, is either Protestant, Catholic or Jewish. The teaching is non-sectarian, but the teachers are required to teach Biblical history, the catechism, hymns, the creed and points of religious ethics.² Section 18 of the "Regulations" of 1872 requires that the Gospel or Epistle for the following Sunday shall be taught by the teacher on the previous Saturday. When the school releases the child, the church takes charge of him, for on the day of his release from school, the child either is "confirmed" in the Protestant church or goes to the "first communion" in the Catholic church.³ The time allotment in the above tables does not over-estimate the importance of this subject in the mind of the German educator.

When a nation of educators have thought over, philosophised about, and actually for so many decades have taught in their schools a subject like this, and give it today from

¹Reports of the Commissioner of Education of the United States, 1889-90, p. 456.

²Reports of the Commissioner of Education of the United States, 1889-90, p. 461.

³Reports of the Commissioner of Education of the United States, 1888-89, p. 51.

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13.8 per cent to 18.8 per cent of the entire recitation time, their practice ought to have some weight with the American people who are seeking to find the legitimate place of the subject in the school curriculum. There may be differences of educational aims between the two systems, but there should be no disagreement as to the importance of any available agency for the furtherance of public morals and public virtue. Whether or not the Germans are more religious or more virtuous than we, does not affect the question; for it can hardly be granted that the German boy knows any less of the Bible than the American boy, or that he is any less upright for what he does know. There have been practically no facts correlated on the subject of the relative Biblical knowledge and religious and moral character of the two peoples, such as would warrant one in drawing comparisons. But what few measurements have been made as to the Biblical knowledge of the American school boy indicate that scarcely any way could be discovered for him to know less of that subject. If the German school boy has learned anything of Biblical truth from his instructor, the advantage is in his favor.

10. Arithmetic.

The German child is said to be much superior to other children in the oral exposition of arithmetic. The Prussian "Regulations" (Sec. 28) are quite clear as to the emphasis to be placed upon mental arithmetic. "In the lower divisions, in schools with one or two teachers, so far as possible, and in the other schools regularly, all calculations are to be done in the head. At the beginning of the new rule, in all divisions, calculations in the head are to precede those done on the board." Another specification is that "the relation to every day life is always to be kept in view." For these reasons the mere number of pages in arithmetic which they do is consid-

erably less than with us. The highest grades of the elementary school are not required to go farther than common and decimal fractions.

As in America, the relative time assigned makes arithmetic second in importance to language. The variation between the ten German cities is about the same as the variation between the ten American cities. The relative time is from 14 per cent to 22.8 per cent in the German tables, between 12 per cent and 19.5 per cent in the American. The average relative time for the ten cities of each country is exactly the same, 17.3 per cent. But in each case there is perhaps an allowance to be made for selection. Munich's 22.8 per cent is as exceptionally high as New York's 12 per cent is exceptionally low. None of the German or American cities devote as much time as Munich to arithmetic.

11. *Realien.*

Realien is the title which the Germans apply to geography, history, elementary science and nature study. These four subjects are not supposed to be separated either in subject matter and method, or in the mind of the child. Object lessons, as taught in connection with language in the lower grades, furnish the preparation for these subjects. There is a very easy and logical transition from object lessons, including the study of objects around the child, to home geography, local traditions in history and elementary nature study. Quite as easy is the next step, leading from the geography of the district to that of the province and Empire; from local history to the biography of great men of the district, province and Empire, and from nature study to physiology and elementary physics. There is in the elementary schools practically no history referring to the great economic and social movements of civilization,—the work is confined mainly to biography,

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Further comparison of Tables LIV.-LVI. with Tables XII.-XIII. reveals the fact that the Germans devote practically the same time relatively and actually to history that we do, but they devote to geography more actual time than we, and it is much better distributed throughout the grades. This is due partly to the fact that home geography has gained a stronger foothold than with us.

12. Correlation.

Correlation, in the sense of the interrelation of the topics from different subjects of instruction, is much more possible between history and geography after the third grade in Germany than in America, because of an equalization of the percentages of recitation time devoted to these two subjects from the third grade on. This equalization is not found in any of the American grades, except the seventh and eighth, whereas it is found in five out of eight grades in Germany.

The correlation cited between history, geography, nature study, elementary science and object lessons is but a type of the evidence appearing in the German curriculum which leads one to believe that correlation is a reality there. Of course, it may be practiced without appearing upon the program, but there is the rarest probability of such being the case in America, where the overworked teacher with a crowded curriculum is only too thankful to finish what is actually and in so many words assigned. Certainly no convincing evidence has been found regarding correlation in our study of the American school. Has it not often been the case that our superintendents and principals have so hastily and thoughtlessly introduced new subjects that they have failed to distribute these subjects and the time allotted to them with that due proportion which makes real correlation possible?

13. Formal vs. Content Studies.

The content studies are more generally taught in the lower

grades and receive more time in America than in Germany. This is largely due to the difference of method. The German philosophy stands for thorough and complete teaching of a subject at one time. The American adheres to the concentric circle system, by which a subject is taught only in part at one time and repeated in the several grades from different points of view. Except for geography, the Germans, unlike the Americans, do not see much reason for introducing content studies in the lower grades; history, nature study, drawing and handwork for girls are scarcely provided for in the first three years of school life.

There is a tendency shown in all these German tables to teach the formal studies in the early grades; the time devoted to them is gradually diminished as the upper grades are approached, and its place is filled by a corresponding increase of the assignment to content studies. The summary in Table LVI. shows that religion, language and arithmetic receive less time in the seventh and eighth grades than elsewhere. On the contrary all other subjects receive more time in the upper grammar grades than elsewhere, and this gradual increase is steady as these upper grades are approached. This is an important distinction between the German uniform curriculum and the variable one of America. In America, arithmetic really receives about as much time in one grade as in another; geography, contrary to the German plan, receives more time in the fourth grade than in the sixth, seventh or eighth; nature study more in the fifth than in the eighth, while drawing, music and physical training receive more time in the first two than in the last two grades.

This distinction raises the problem whether it is better to follow the German plan of teaching the formal in the earlier school life of the child and the more concrete in the later life, or to follow the American plan which seems to be just the re-

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verse. Or, might it not be better, departing from both plans, to teach the more abstract formal studies through the more concrete content studies, in all grades, until a satisfactory knowledge of the subject is acquired?

CHAPTER IV.

THE CURRICULUM OF PUBLIC ELEMENTARY SCHOOLS IN FRANCE.

1. *Administration of the Elementary Schools.*

All the schools of France, both public and private, are under the direct control of the State. No money is expended, no book adopted, no study introduced into the program without the consent of the central authority. This authority is vested in the Minister of Public Instruction and Fine Arts (Ministre de l'Instruction publique et des Beaux-Arts), who is a Cabinet officer and possesses extensive administrative power. He is assisted by the Superior Council of Public Instruction, composed of sixty members, fifteen of whom are chosen by the President of the Republic, the remainder being elected by their colleagues, the professors and teachers. This Council meets twice a year. An executive Committee of fifteen, chosen from the sixty, meets weekly with the Minister and transacts the bulk of business. The course of study for each and every public elementary school is prescribed by the Minister and the Council. They choose books, create and suppress schools, and advise about all matters of instruction and administration.

For the supervision of the system and the execution of the laws and decrees of the Minister, the country is divided between seven General Inspectors. Under these are ninety Academy Inspectors, one for each Department, France being divided for educational purposes into ninety Departments or

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large counties. Below the Academy Inspectors are about four hundred and forty Primary Inspectors, one for about every one hundred and fifty schools. The Primary Inspectors come in more direct contact than the other officials with the teachers and the pupils. It is their business to see that the curriculum prescribed by the central authority is properly carried out.

France, including Algiers, is divided into seventeen Academies or administrative divisions. These seventeen Academies are further divided into ninety Departments, the civil heads of which, known as the Prefects of the Departments, are appointed by the President. The Department is the local unit for primary school administration; for instance, if additional studies were to be added in any school, over and above those prescribed by the Minister and his Council, the selections would be made by the Department, through the Prefect and Departmental Council, subject to the approval of the higher authorities. Each Department is divided into Arrondissements, each Arrondissement into Cantons, and each Canton into Communes, which are the smallest unit within the complex French educational machine.

The only important work done by any local authority is the supervision of the compulsory attendance laws by the communal school committee (Commission Scolaires). The State through its various inspectors manages nearly all the system from Paris. It secures this right by paying the larger part of total running expenses of the schools. It pays the salaries of all elementary teachers. The local community only builds the school house.

The course of study presented in France is created and controlled by the most highly developed bureaucratic system of education in the world today. Down to the smallest details, each item is passed upon by the central officers at Paris, either directly or by proxy. The departmental Council, it is true, adds studies and, within numerous required limits, may pre-

scribe the time per week to be devoted to a study. But the Prefect of the Department and the Academy Inspectors are officers appointed by the President of the Republic.

2. General Laws Relating to the Elementary Schools.

By the law of October 30, 1886, which is still operative, primary schools comprise: (1) Infant Schools and Classes; (2) Lower Primary Schools; (3) Higher Primary Schools (or higher grades attached to Lower Primary Schools and called Cours Complementaires); (4) Technical or Professional Schools.

Primary education is free in all these grades and compulsory for all children from six to thirteen, unless they have obtained the "Certificate of Primary Studies," for which they are eligible at eleven years of age. As a matter of fact, the vast majority of children, especially in the rural districts, manage somehow to obtain this certificate and leave when they are eleven years old.

We shall interest ourselves only with the course of study presented in the first two divisions of the French school system, and with the first only incidentally, as it is related to the Lower Primary School. These Lower Primary Schools are chosen for study because only a small percentage of the pupils in the public elementary schools attend any other than the Lower Primary School. Both the certificate of exemption from compulsory attendance, obtainable at eleven years, and the limit of the compulsory attendance law at thirteen years of age, in effect make the Lower Primary the school attended by the masses.

The Lower Primary Schools (*Écoles Primaires Elementaires*) of France receive children between the ages of six and thirteen. That is, they provide for their tuition during seven years of compulsory attendance. The course of instruction is divided into three divisions: (1) the elementary, for

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children from seven to nine; (2) the middle course, for children from nine to eleven; (3) the higher course, for children from eleven to thirteen. Each course is to employ the child for two years. These divisions are compulsory for all elementary schools, except those with one teacher only, where the two upper courses may be given without division. Children below the age of seven are provided for by an infant section.

In schools with two teachers, one has charge of the infant section and the elementary course, the other of the two upper courses. In schools with three teachers each course forms a distinct grade. In schools with four teachers, the elementary course is divided into two grades with a teacher to each grade, and the other two teachers take the middle and higher courses as a grade each. In schools with five teachers, the two lower courses are each divided into two grades with a teacher to each grade, and the higher course is taught by the fifth teacher. In schools of six teachers, each course is divided into two grades, and each grade is given to a teacher. If a school has more than six teachers no new grades are formed, but crowded grades are divided into sections. In case there were two years devoted to the infant section, there might be eight grades in each school, beginning with children five years of age and ending with those thirteen years of age. In case of one year devoted to the infant section, there might be seven grades. But very often the infant class is in a separate building or in the Maternal School. Six grades, beginning with our second grade, or with children seven years old, are the rule for cities.

In all cases in which the same course comprises two grades, one grade represents the first year and the other the second year of the course. The two grades follow the same course of study, but the lessons and exercises are so graduated that in the second year pupils review and complete the studies of the first. This method of proceeding by concentric circles rather than by progress and development of new matter is opposed

wherever the German method is popular. The French plan lays stress upon one very important consideration, almost unknown in American syllabi or curricula. The law insists that the second year work of a division shall "review, deepen and complete" the first year's work. There is no specification as to review in the American curriculum. "Something new" is supposed to be necessary and review is left to the whim of the individual teacher.

3. The Curriculum and Organization of the Sub-Primary Schools and Classes.

Before entering upon the discussion of the elementary school curriculum proper, it will be necessary to explain the mechanism and the work of the two kinds of kindergarten schools to which is entrusted the education of the French child before he enters the first course of the elementary school.

These two schools are known as Mother Schools (*Écoles Maternelles*) and Infant Classes (*Classes Infantines*) or, when they are attached to elementary schools, Infant Sections. It was estimated that there were 1,348,443 children under six years old in the schools of France in 1897 in these two kinds of schools. This does not include the number in Infant Sections attached to elementary schools.

The Maternal Schools, not being obligatory for communes with a population under two thousand, are confined to the larger cities. They receive children from two to six years of age, except in Paris where pupils may attend until they are seven years old. The schools are kept open for forty-eight weeks during the year, six days in the week, and are open from 7 A. M. until 7 P. M. in summer and from 8 A. M. until 6 P. M. in winter. About four hours of this time are taken up with class room work. There are two divisions, one for small children from two to five years old, and one for children from five to six.

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The decrees of the Minister and Superior Council of Education, dated January 18, 1887, and August 8, 1890, prescribe a lengthy syllabus of instruction for Maternal Schools, including rules for governing them. The subjects of instruction are the same for the two sections, except that recitation and national history are taught only in the upper section. The subjects are:

1. The first principles of moral education.
2. Some knowledge of common things.
3. The elements of drawing.
4. The elements of writing.
5. The elements of reading.
6. Lessons in language.
7. Some idea of natural history and geography.
8. Recitation.
9. Manual Training.
10. Number.
11. Singing.
12. Gymnastics.

There is no allotment of time made for this program. The official time allotment of the Paris Maternal Schools which is presented below, will give an approximate idea of the disposition of subjects and the relative time spent upon each. A few facts must be kept in mind in interpreting this table. First, these schools cover one year more in Paris than elsewhere in France. They open for school work at 6 A. M. and close at 4 P. M. Of these seven hours, recess periods take up fifteen minutes in the forenoon, thirty minutes in the middle of the afternoon, one hour and thirty minutes for lunch and noon recitation, and thirty minutes before both morning and afternoon sessions for inspection of cleanliness, which leaves but three hours and forty-five minutes recitation time.

Exception has been made for Paris as to time of sessions.

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TABLE LVIII.—Showing the Minutes per Week devoted to Each Subject in the Maternal Schools of Paris.*

| Subject. | Minutes. |
|--|----------|
| 1 Moral Instruction | 80 |
| 6 Language including Reading and Writing | 450 |
| 8 Number Work | 135 |
| 9 Geography | |
| 10 History and Stories | 180 |
| 12 Common Things | 45 |
| 16 Recreation in class | 300 |
| 17 Drawing | 90 |
| 18 Singing | 90 |
| Total | 1350 |

(Taken from "Règlement Écoles Maternelles Publiques," adopted by the Departmental Council of the Seine, March 16, 1893.)

In the Maternal Schools, Thursday is not a regular school day so far as all the subjects upon the time table are concerned. The school meets under the regular teacher or her assistant, one of whom is given a holiday each Thursday. The school is not in session so long as on other days and is more nearly given up to motor-active subjects. There are ninety minutes of class work in the forenoon and a hundred and five minutes in the afternoon, in which time manual exercises, gymnastics, singing, conversation and recitation constitute the subjects of instruction.

The law of 1893 changed the curriculum of the Paris Maternal School, and as the change illustrates a tendency more or less apparent throughout the entire French system, it is worthy of notice. Natural history was dropped except as taught in connection with common things; the time devoted to moral instruction was decreased thirty minutes per week; language lessons lost ninety minutes per week; common things lost ninety minutes; recreation was increased thirty minutes. The only intentional changes seem to be in the case of morals and those subjects relating to elementary science, the other changes being occasioned doubtless by the lightening of the work on Thursdays. The whole tendency is toward amelioration of the strenuous intellectual requirements, and the course

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accordingly makes a stronger appeal to one's judgment than the severe requirement in the Infant Schools of England.

The subjects taught in the Infant Classes are the same as those given in the Maternal Schools. Wherever, as in the larger cities, there exists both a Maternal School and an Infant Class, the latter is regarded as a connecting link between the former and the Elementary School. Only in larger cities do the two types exist; poorer municipalities have only the Infant Classes. In Paris, the Infant Class keeps the child until his eighth birthday. Throughout the whole French system the Infant Class simply prepares him for the Elementary School. In smaller communities the Infant Section is merely a one or two year course, according as the child enters at five or six years of age. It is attached to the Elementary Course of the Lower Primary School, and is frequently, in poorly staffed schools, taught by the teacher of the Elementary Course. The subject matter and time allotment in such schools are the same as in the first grade of the Elementary School proper. In fact the Elementary School in France, just as in England, begins with the second grade year.

The program of the Maternal School (see pp. 158 and 159) appears rather difficult for small children, but the method of using the program relieves it of its apparent frightfulness. No lesson is more than twenty minutes long, and stringent care is required to avoid mental fatigue. The school for children under five years old is regarded merely as a place where working mothers can leave their children and have them cared for during their busy hours. Even during the lesson time, "a lesson which employs the hand always follows one which employs the mind." Reading and writing are not begun until the children are five, and sewing is forbidden by law because of the possible detriment to the eyes at an early age.

What is the object of these two classes of Kindergarten Schools, the one required by law to take children who may

come from the homes at two years of age and keep them until the age of compulsory attendance, and the other to take them a year before compulsory attendance and keep them a year after it begins? What purpose do they serve, what ideas embody, that they have an attendance of nearly one and a half million children? The law itself states the purpose of the Maternal School: "The École Maternelle is not a school in the ordinary sense of the word; it is the transition from the family to the school; it retains the indulgent and affectionate gentleness of the home, while initiating the child into the work and regularity of the school. The success of the headmistress of the École Maternelle must not, therefore, be judged wholly or principally by the number of things taught to the children, or by the high level of the teaching and the number and length of the lessons; but rather by the sum of good influences which are brought to bear on the child by the pleasure which he is made to take in school, by the habits of order, cleanliness, politeness, attention, obedience, and intellectual activity which he acquires, so to speak, in *playing*." The purpose of the Infant Classes and Sections is largely the same as that of the Maternal Schools, with perhaps more emphasis upon the school than upon the home point of view.

The ideal and its execution in the French system of Kindergarten instruction are a justification for presenting the curriculum of these schools in connection with the study of the public elementary school. One serious and unsettled problem in American education is how to bridge the chasm from the home to the school. A correlative task is how to adjust the subject matter and methods of the kindergarten to those of the primary grades. The kindergarten in America seems unable to offer a solution, for the very practical reason that it exists so rarely as not to be considered a serious item in the elementary educational situation. Few, even of the larger cities, offer kindergarten privileges to all their children under

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six years of age. To the practical mind of the educational financier in America, it is too expensive to justify its methods of learning by play and self activity.

Even if the American educator could become convinced of a theoretical value in the kindergarten as a connecting link between the home and the elementary school, the present absolute difference of subject matter and methods in the two schools would bar the adoption of the kindergarten as a means to such a desired end. That fundamental differences exist is an accepted fact, observable by any visitor to the two schools.

The French offer suggestions of relief to us in two particulars. First, the elementary curriculum is modified to suit the needs of human life in its present condition rather than in some past or future form. This modification has made it possible to start with the life of the home as the child brings it to the Infant School and continue it without a break into and throughout the elementary school. With us, the change must be made in the subject matter of the elementary school rather than in the kindergarten, for our kindergarten begins with the life of the home; but when the kindergarten has brought the child, with his needs and the training of two years based upon these needs, to the primary school, he is met with a rebuff. The formal studies, which in a large measure respond to no immediate need, experience or demand of the child or of his home life, are forced upon him and the continuity of training is immediately broken.

The experts in the employ of the educational bureau of France insist with weighty reason upon the continuity of the curriculum begun in the kindergarten.

It is true that the central organization assists in bringing about this connection between home and school. But it is not believed that such desiderata are impossible even under our system. If, however, some form of centralized control is

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essential, then let it come. The absence of it is but a mark of inefficiency, if that uniformity and unbroken continuity, which are essential to any effectual educational system and the prerequisites of a good course of study, cannot be attained without bureaucratic control.

If the study of the French sub-primary schools can assist us in connecting the home with the school, and the kindergarten with the primary school, and in discovering some way to construct a continuous course of study organically related in its parts, it will have rendered us an important service.

In the study of the elementary curriculum in France, which is now taken up, only two tables are offered. The first shows the subject matter, its distribution by grades, the time allotted to it in each grade, and the relative percentage of total time spent upon each subject in each grade, for all the public elementary schools of France. This table is prescribed by the Minister of Education and his Council. The second table shows the same items for Paris. It is unnecessary to make an extended study of the curricula of various schools of France, as has been done for the schools of the other countries, as the perfection and the absolute precision of the laws made by the central authority fix the smallest detail for each city. A type study of the Paris schools is sufficient.

The first table was correlated from the following sources: the law of March 28th, 1882, sketching the curriculum for all grades of Primary Schools; the decree of January 18th, 1887, fixing the details of the program for Elementary Schools; the decrees of August 8th, 1890, January 4th, 1894, March 9th, 1897, and September 17th and 20th, 1898, completing the curriculum of 1887. In these laws certain rules regarding the time table are prescribed: (1) At the beginning of each year a time table of subjects taught each day and hour, approved by the Primary Inspector, shall be posted by the principal in each class room; (2) The more difficult subjects shall be re-

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TABLE LIX.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given Each Subject in the Public Elementary Schools of France.

| Course. Grade. | Elementary. | | Middle. | | Higher. | | Pct. |
|-------------------------|------------------------------------|-------|-----------------------|-------|---------|-------|-------|
| | II. | III. | IV. | V. | VI. | VII. | |
| 1 Moral Instruction | Five Recitations per week. | | | | | | |
| 3 Writing | 300 | 300 | Gradually decreasing. | | | | |
| 6 Language ¹ | 600 | 600 | 600 | 600 | 600 | 600 | 33.3 |
| 8 Arithmetic | 225 | 225 | 300 | 300 | 300 | 300 | 15.3 |
| 9 Geography | | | | | | | |
| 10 History | | | | | | | |
| 11 Civics | 300 | 300 | 300 | 300 | 300 | 300 | 16.5 |
| 12 Common Things | | | | | | | |
| 13 Elementary Science | 75 | 75 | 150 | 150 | 150 | 150 | 6.3 |
| 16 Physical Training | 150 | 150 | 150 | 150 | 225 | 225 | 9.6 |
| 17 Drawing | Two or three Recitations per Week. | | | | | | |
| 18 Singing | 60 | 60 | 60 | 60 | 60 | 60 | 3.3 |
| 19 Manual Training | 150 | 150 | 150 | 150 | 180 | 180 | 8.2 |
| 20 Sewing | (150) | (150) | (150) | (150) | (180) | (180) | (8.2) |
| Total | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade.

| | | | | | | | |
|-----------------------|-------|-------|-------|-------|------|------|--|
| 3 Writing | 16.6 | 16.6 | | | | | |
| 6 Language | 33.3 | 33.3 | 33.3 | 33.3 | 33.3 | 33.3 | |
| 8 Arithmetic | 12.5 | 12.5 | 16.6 | 16.6 | 16.6 | 16.6 | |
| 9 Geography | | | | | | | |
| 10 History | | | | | | | |
| 11 Civics | 16.6 | 16.6 | 16.6 | 16.6 | 16.6 | 16.6 | |
| 12 Common Things | | | | | | | |
| 13 Elementary Science | 4 | 4 | 8.3 | 8.3 | 8.3 | 8.3 | |
| 16 Physical Training | 8.3 | 8.3 | 8.3 | 8.3 | 12.5 | 12.5 | |
| 18 Singing | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | |
| 19 Manual Training | 8.3 | 8.3 | 8.3 | 8.3 | 10 | 10 | |
| 20 Sewing | (8.3) | (8.3) | (8.3) | (8.3) | (10) | (10) | |

¹ Language includes reading, spelling, dictation, grammar, recitation and composition.

(This table was compiled from the decrees issued by the Minister of Education for France Jan. 18th, 1887, Art. IX, XIX, as found in G. Compayré's "Organisation Pédagogique," supplemented for Manual Training by the decree of Sept. 17, 1898, and for Gymnastics by the decree of Aug. 8th, 1890, published by Delalain Frères, Paris, Collection 65.)

cited in the mornings; (3) Every lesson and every task is to be accomplished by explanations and questions; (4) Corrections of tasks and recitation of lessons are to take place during the hours to which such tasks and recitations belong; (5) There shall be thirty hours per week of recitation, not including home study or study in the school room.

The schools continue at least forty weeks each year. The

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TABLE LX.—Minutes of Recitation Time per Week devoted to Each Subject in Each Grade, and the Percentage of Total Time given to Each Subject in the Public Elementary Schools of Paris.

| Course. | Elementary. | | Middle. | | Higher. | | Pct. |
|--------------------------------------|-------------|-------|---------|-------|---------|-------|------|
| Grade. | II. | III. | IV. | V. | VI. | VII. | |
| 1 Moral Instruction | 60 | 60 | 60 | 60 | 60 | 90 | 3.3 |
| 2 Reading | 300 | 300 | | | | | 5.5 |
| 3 Writing | 300 | 300 | 90 | 90 | 90 | 60 | 8.6 |
| 6 Language, including | | | | | | | |
| (4) Dictation | 150 | 150 | 540 | 540 | 540 | 420 | 22.8 |
| (5) Grammar | | | | | | | |
| (6) Recitation | 60 | 60 | | | | | |
| (7) Composition | | | | | | | |
| 8 Mental Arithmetic or Metric System | 150 | 150 | | | | | |
| Arithmetic and Metric System | | | 270 | 270 | 270 | 240 | 12.5 |
| 6 Geography | 120 | 120 | 210 | 210 | 210 | 210 | 10 |
| 10 History | | | | | | | |
| 11 Civil Government | | | | | | | |
| 12 Common Things | 60 | 60 | | | | | |
| 13 Physical & Natural Science | | | 90 | 90 | 90 | 120 | 4.8 |
| 16 Gymnastics | 150 | 150 | | | | | |
| Recreation | 150 | 150 | 210 | 210 | 210 | 210 | 13.3 |
| 17 Drawing | 120 | 120 | 120 | 120 | 120 | 180 | 7.3 |
| 18 Singing | 60 | 60 | 60 | 60 | 60 | 90 | 3.6 |
| 19 Manual Work | 120 | 120 | 150 | 150 | 150 | 180 | 8 |
| 20 Sewing | (120) | (120) | (150) | (150) | (150) | (180) | (8) |
| Total | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | |

Percentage of Recitation Time devoted to Each Subject in Each Grade.

| | | | | | | | |
|----------------------------|-------|-------|-------|-------|-------|-------|--|
| 1 Moral Instruction | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 5 | |
| 2 Reading | 16.6 | 16.6 | | | | | |
| 3 Writing | 16.6 | 16.6 | 5 | 5 | 5 | 3.3 | |
| 6 French Language | 8.3 | 8.3 | 30 | 30 | 30 | 23.2 | |
| 8 Arithmetic | 8.3 | 8.3 | 15 | 15 | 15 | 13.3 | |
| 9 Geography | | | | | | | |
| 10 History & Civics | 6.6 | 6.6 | 11.6 | 11.6 | 11.6 | 11.6 | |
| 12 Common Things | | | | | | | |
| 13 Elementary Science | 3.3 | 3.3 | 5 | 5 | 5 | 6.6 | |
| 16 Gymnastics & Recreation | 16.6 | 16.6 | 11.6 | 11.6 | 11.6 | 11.6 | |
| 17 Drawing | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 10 | |
| 18 Singing | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 5 | |
| 19 Manual Work | 6.6 | 6.6 | 8.3 | 8.3 | 8.3 | 10 | |
| 20 Sewing | (6.6) | (6.6) | (8.3) | (8.3) | (8.3) | (10) | |

average school year is from forty-two to forty-five weeks in length. Usually there are ten months of school proper; July, the eleventh month, is reserved for reviews.* There are five

*Special Reports on Educational Subjects, Vol. VII., p. 99.

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days of school each week, with a holiday Thursday. Six hours constitute the length of the daily sessions, three in the morning from eight to eleven o'clock, three in the afternoon from one to four. Two hours are given for recess. Promotion does not take place by years from grade to grade within a "course," but at the teacher's discretion.* However, this amounts usually to promotion by years, except from the kindergarten schools where the transitions may occur three times a year, at October, January and Easter.

The French child who attends this school from his seventh until his thirteenth birthday has attended school more hours than the child of the same age in England, Germany or America. There is no other system which requires children to attend school such a large number of hours a week. The Prussian requirement shown in Table XLIV. approaches it in the upper grades but not in the lower.

The American pupil, if he desires, probably remains in school a year longer than the French pupil but our school year is much briefer than the French. The American has about a scholastic month less each year. He misses two years furnished by the French Maternal and Infant Schools and he has one school hour less every day. Of course, however, the special exemptions from the compulsory attendance laws must be taken into account in the individual system under consideration.

4. *Time Allotments and Subjects Emphasized in the Elementary Curriculum.*

If Table LIX. be contrasted with any of the preceding tables showing the emphasis placed upon different subjects, either by the central government or by the majority of cities, several differences are apparent as to time allotments. The "three R's" do not monopolize and overbalance the curriculum in

*Special Reports on Educational Subjects, Vol. VII., p. 87.

France, the percentage being 48.6 per cent of the whole—fully 10 per cent less than is devoted to this group of studies in America. This table shows far more relative time devoted to manual training, nature study, geography, history and civil government, and physical training than is found in the American tables. Especially in manual training, drawing and physical training is this the case, nearly twice as much time being given to manual training and drawing in the French city school which is least advanced in these subjects as in the most progressive city schools of America.

How shall we account for this unusual decline in the importance attached to the formal studies, and this unparalleled emphasis upon the content studies? If we adopt a current definition of content studies, which describes them as those studies leading more directly to an insight into the structure of society, we can easily say that the curriculum of France is two-thirds given over to content studies. How is this to be explained? The answer is found in the definite aim set up by France and in the thoroughly organized system by means of which all forces are directed toward this end. Their principle of selection is thus stated by a recent French writer: "The Republic was from the first convinced that France, overcome by misfortunes, ought to find in every citizen a soldier and in every soldier an educated man."* The validity of this aim is not to be discussed here; surely it is better than no aim. It lends at once definiteness and liberality of judgment freed from the slavish worship of the curriculum of bygone days.

All France regards the Primary School as a civic institution. The French teacher has a purely civic mission to perform as his first duty, other educational considerations coming afterward. He must before all else make a French citizen. That citizen must be a physical, an intellectual and a moral

*Maurice Faure, in *Reports of Commissioner of Education, 1898-99*, p. 1095.

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man. Therefore all education has three distinct divisions. The government and municipal syllabi show the subject matter divided into these three groups, with a careful appointment of time to each. After the Franco-Prussian war, France needed farmers, artisans and soldiers, all of whom should be moral, capable and full of patriotism to France. Hence the 16.5 per cent of relative time given to their national history and national geography, and the 6.3 per cent to nature study and elementary science as applied to agriculture and horticulture, as well as the 8 per cent of time devoted to manual training.

The tendency has somewhat changed in recent years with respect to the emphasis placed upon the special studies like manual training, drawing and physical training. In 1889 when the need of such studies reached its greatest prominence in the public mind, the Department of the Seine, including the schools of Paris, curtailed the time given to moral training, reading, declamation, French language and arithmetic, and gave the borrowed time to physical training, drawing and manual training. This probably gave greater emphasis to the last three subjects than they have ever received in the course of study of any city so representative as Paris. In 1898, however, the law for the Department of the Seine changed the time devoted to certain subjects in the fourth, fifth and sixth grades. The subjects losing time were writing, manual training, gymnastics and recitation. The subjects which gained time were French language, arithmetic and civil government. This marks a reversion to the law operating before the extreme emphasis had been placed upon manual training, drawing and gymnastics. There is yet, however, much more time devoted to the last three subjects than is given them in the schools of the United States.

There was one other interesting feature in the experiment made by the School Commissioners for Paris, 1889 to 1898.

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In the law of 1889, manual training, drawing and singing were distributed with little variation of recitation time over the three courses, elementary, middle and higher. The primary pupil was supposed to pursue these subjects with only little less ability than the upper grammar grade pupil. This regulation was reversed by the law of 1898. The relative time allotment of groups of subjects as it appears in the syllabus of the Elementary Schools of Paris at present is as follows:

| Course. | Age. | Time per Week Devoted to | | |
|------------|-------------|--------------------------|-------------------------------------|--------------------------|
| | | General Instruction.* | Drawing, Manual Training & Singing. | Gymnastics & Recreation. |
| Elementary | 7- 9 years | 1200 | 300 | 300 |
| Middle | 9-11 years | 1140 | 360 | 300 |
| Higher | 11-13 years | 900 | 540 | 360 |

This summary shows an increasing time allotment to special studies in the upper grades and a decreasing time allotment to the general studies. It suggests that specialization is being removed from the lower grades to the higher. This is certainly in harmony with the American policy of bringing electives as near as possible to the high school and out of the elementary grades. May this not cause one to wonder if France has not learned a lesson and is not attempting to retrace her steps in search of middle ground between the formal and the content studies? There certainly is a valuable suggestion in this revision regarding the question of the place of electives and the nature of the subjects of instruction which should make up the elective course.

5. The Striking Qualities and the Content of Particular Subjects of Instruction.

Let us analyze certain interesting subjects of instruction found in Tables LIX. and LX. in order to ascertain their content and their organized relation, as contrasted with the same analysis of similar subjects in America. We shall first

*General instruction refers to all other subjects found in Table LX. except these specified here in the two columns to the right.

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consider what to the Frenchman is the most important subject in the curriculum.

MORAL INSTRUCTION.—The German and the English appeal to the volitional and religious sentiments of their school children by teaching the Bible and religion; democratic France claims that morality is more universal. We are told that she is at present subordinating everything else to moral instruction.* The effort of recent years is to develop a social morality, a morality which will emphasize the virtues not as abstractions, but as they are called for by the relations between people in the community. The low assignment of relative time to this subject does not indicate its importance, as the Minister of Education has issued definite instructions to the effect that every lesson, if possible, shall be a lesson in morals. The summary of the topics in this subject prescribed by the government syllabus, is given below, the numbers referring to the grades in which the topics are taught:

Conversations and readings on morals, II., III., IV., V.; instruction from observed facts, I., II., III., IV.; the child in the family, IV., V.; the child in the school, IV., V.; the native land, IV., V., VI., VII.; duties toward oneself, IV., V.; duties toward other men, IV., V; regard for animals, IV., V.; social morality, VI., VII.; the family, VI., VII.; conditions of society, VI., VII.; alcoholism, VI., VII.; duties of the citizen, VI., VII.; taxes, VI., VII.; the ballot, VI., VII.; rights of the citizen, VI., VII.; personal liberty, VI., VII.; security of life and property, VI., VII.; the national sovereignty, VI., VII.; difference between duty and interest, VI., VII.; distinction between written and moral law, VI., VII.

The question naturally arises whether it is worth while to provide for the teaching of morals and manners by appointing a specific recitation in that subject in the program. Will

*"Educational Lessons of the Paris Exposition," by A. T. Smith, in *Educational Review*, September, 1901.

the children be any more polite, any more unselfish, modest and refined? Or is such teaching, as many pessimists claim, so theoretical, so far removed from life, that the child forgets to practice it outside the school room?

Perhaps no better evidence is extant upon this subject than that offered by Mr. Brereton, who was in 1901 appointed by the Board of Education of England to make a careful personal visit to the rural and village schools of France, and report to the Department. His summary is as follows:

"Of the discipline and behavior of the pupils in every grade and type of school it would be difficult to speak too highly. Alike in the towns and in the villages, on the playground and in the class room, courtesy is the invariable rule. The children answer brightly and intelligently, they like to show their work, and their interest in the experimental and practical lessons is very marked. Students in the higher schools and colleges are just as courteous. There is the same disposition everywhere to assist a stranger, to answer all his questions and to tell him what he wants to know. Even in the class rooms for older girls as at *École Menagere* at Rouen, there is no trace of '*mauvaise honte*' or giggling, and all the girls, except the one addressed, proceed quietly with their work. Of course the same features might be observed in English schools, but it is to be feared that in many of our village schools the appearance of a foreigner speaking indifferent English and asking innumerable questions might attract unpleasant attention. My inquiry led me over a wide area and in no case did I experience the slightest rudeness or foolish shyness. Boys and girls at play would run off at once to fetch any one whom one wanted, while the rest went on with their games. Lightheartedness and good fellowship seem to pervade every school."*

Truly, when the American citizen studies the attempt in

*Special Reports on Educational Subjects, Vol. VII., p. 255.

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the public elementary schools of the other leading nations of the world to train a virtuous citizen by instruction looking directly to that end, he must experience a sense of regret and shame. America alone makes no direct and specific provision for the moral or religious training of her children in the public schools. We too often attempt to excuse our negligence by flippant derision of such efforts upon the part of other nations. Such wholesale criticism ought not to be expressed without sufficient evidence. It is suggested, for instance, that the conclusions in the above quotation are not logically drawn, inasmuch as those results observed by the English educator may have come from the fact that the French are naturally polite. This we shall grant in part, but it is not universally agreed that good morals and polite manners are native instincts transmitted through heredity. We believe that the environment contributes more to the making of the moral and courteous citizen than the particular parentage from which he springs. At least the public elementary school is founded upon this hypothesis. And we are strongly of the belief that the definite aim of the school to inculcate manners and morals lends much to the totality of those environmental influences which produce the French hospitality and politeness. Few students fail to be impressed with the absolute sincerity and earnestness of the French people with regard to moral training, as expressed by the publications of the State officials and the efforts of their teachers. There may be some excuse for the prejudice against the experiment as it is found in the schools of a monarchy, but when the results have been found gratifying in the schools of a democratic government resembling our own, much of our adverse criticism should give place to constructive experiments in the same direction.

HANDWORK.—It has been shown by previous statements that the French government in attempting to develop the

useful citizen and an intelligent artisan class directed its attention toward manual training. This emphasis is manifested in the assignment of a larger amount of time to manual training than is given that subject in the schools of any other country. Another interesting feature of this study is that the government not only assigns the time but enumerates the topics to be taught. In the following summary relatively few topics may be observed in the six year course, as contrasted with similar work done by our own schools. The topics are as follows:

For boys: card board cutting, II., III., IV.; basket work, II., III., IV.; clay modeling, II., III., IV.; book-binding, V., VI.; bent iron work, V., VI.; wood work, V., VI.; study of tools, V., VI.; drawing and modeling, VI., VII.; use of plane, VI., VII.; finishing and polishing, VI., VII.

For girls: elementary sewing, II., III., IV., V., VI.; straight sewing, whipping and seaming, III., IV., V., VI., VII.; sewing on coarse cloth, III., IV.; sewing by design, III., IV., V., VI.; mending, III., IV., V., VI., VII.; crochet, II., IV., V., VI., VII.; knitting, II., III., IV., V., VI., VII.; making small garments, IV., V., VI., VII.; work on sewing machine, VI., VII.

GEOGRAPHY.—Geography furnishes another example of the importance attached in France to an understanding of the local and national environment. The following summary of topics from that study will show that most of the attention is given to the geography of France. The study of the geography of other parts of the world is taken up in only a few lessons at the end of the elementary school life. The same intensely national spirit, mentioned as a reason for the unusual allotment to geography and history, is exemplified in the selection of topics in geography. The topics and the grades in which they are taught are: the cardinal points, II., III.; the weather, II., III.; geographical terms, II.,

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III.; home geography, II., III.; features of local geography, II., III.; map study, II., III.; France and her colonies, IV., V., VI., VII.; map drawing, IV., V., VI., VII.; political geography of France, IV., V.; physical and political geography of Europe, VI., VII.; geography of the world, VI., VII.

HISTORY.—History is taught in the same grades as geography, and special emphasis is given in its study to the civil government of France. No table heretofore presented shows such a splendid opportunity for correlation as does the French arrangement of nature study, geography and history. The same willingness to omit all except the indispensable, which has been found to be the characteristic of geography and history teaching in German schools, as distinguished from our own, is to be remarked in the schools of France. The topics and grades are:

National history, I., II., III., elementary French history to the Hundred Years' War, II., III.; elementary French history since the Hundred Years' War, IV., V.; review of the history of France, VI., VII.; notions of general history, VI., VII.; notions of antiquity, VI., VII.; notions of medieval and modern history, VI., VII.; current events, VI., VII.

In the outline of history offered by Gabriel Compayré in his book "*Organisation Pédagogique*" (pp. 108-115), in the six years' course under discussion only three months out of forty-four contain topics that might be included under any other than French history.

LANGUAGE.—We shall not take space to give an analysis of the subject matter in language. There are two peculiarities, however, which ought to be mentioned. A large amount of national literature is taught in both France and America. It is barely possible that in democratic countries it is of more vital importance that the national literature receive greater prominence; but, however that may be, much of the time for language study is given to formal grammar in Germany and

England. The other feature, peculiar to France, is that the large amount of time devoted to composition writing is given over to making brief summaries of good literature, a practice worthy of emulation elsewhere.

ARITHMETIC.—The analysis of topics in arithmetic is given below merely to corroborate an opinion already offered, to the effect that overcrowding in the American curriculum is due largely to the lack of good organization of the sub-topics in the various studies and to unwillingness to omit those topics that have no great usefulness to the child or society. It will be noticed that there are far fewer topics in arithmetic than are found in Table XIV. for ten American schools, notwithstanding the fact that this table was prescribed not for ten schools but for all the schools of France. It also appears that certain fundamental topics are taught within a few grades and dispensed with, whereas with us they are repeated in all the grades. The topics are: numeration, addition, subtraction, multiplication, II., III.; division, weights and measures, II., III., IV., V., VI., VII.; mental arithmetic, II., III.; review of previous courses, IV., V., VI., VII.; fractions, IV., V., VI., VII.; decimal fractions, IV., V.; proportion, IV., V.; simple interest, IV., V., VI., VII.; prime factors, greatest common multiple, discount, partnership, metric system, book-keeping, VI., VII.; geometry, II., III., IV., V., VI., VII.

PHYSICAL TRAINING.—It would not be proper to close the discussion of the content and emphasis of the individual subjects of instruction without noticing what is most conspicuous in the curriculum of the French schools, viz., the great importance attached to physical training. Its relative importance is shown in the allotment of 9.6 per cent of the total school time of all French schools to physical training. In Paris 13.3 per cent of the total recitation time is given to it. The law for the schools of the Republic requires that

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two hours per day shall be given to physical exercise, including recess and recreation. Manual training and calisthenics furnish extra exercise. As they enter school in the mornings and afternoons all children are required to be inspected for physical cleanliness, these periods being reserved on each program. We are told that if they do not pass muster they are rushed off without hesitation to the bath rooms, with which many of the schools are provided. The schools of Paris are medically inspected twice a month; the Maternal Schools are visited once a week by a physician; official regulations forbid the teaching of sewing to small children, for hygienic reasons; the teachers are required to be present on the play grounds during recess periods to direct the play of the children. These are only a few of the regulations regarding the physical development of the child intrusted to the care of the State. Certainly, there is no such painstaking care for the health of the American child on the part of the State, and the assignment of time for that purpose which has been shown on previous pages does not make such care possible in the schools of the United States.

6. *Organic Unity in the Course of Study.*

Viewing the curriculum of France in all its relations we are forced to conclude that centralization under State control is the lesson which France has for us. Its perfectly developed bureaucratic organization, and its clearly conceived plan for the whole of the educational system guarantees success in its undertakings. Every man knows his work. Each teacher is in full possession of the State's policy as it applies to every school of a given type. The most perfectly trained educational experts of the nation are in the government's service, usually as leaders in the central offices. Such a company must of necessity inspire the confidence and emulation of the great mass of teachers in the service of elementary

schools. By means of the connection maintained through the inspectors sent out from the central bureau, there arises a coöperation between the teachers of the various localities and the central authority, which makes it possible to accomplish definite results.

The first of the achievements attained by this perfectly articulated system is an almost ideal uniformity regarding the particulars of the elementary curriculum. Practically all studies begun by the child who enters school at five or six years of age are continued by him in some form until he is thirteen. The only changes noted are those referring to the amplification of the course in history so as to include civics, the extension of ornamental drawing so as to include linear drawing, and the direction of elementary science and nature study toward horticulture and agriculture by means of the school garden. It has already been shown that such a perfect balancing of the formal and the content, the abstract and the concrete, the theoretical and the practical, cannot be found in any of the other systems of education. This observation is especially pertinent to the schools of the United States.

Tables LIX. and LX. display types of a course of study having such perfection of articulation and such unified parts, that the admission or omission of any study would require the remodeling of the entire course. This curriculum above all others, therefore, must be regarded as a unified whole and not as a collection of unrelated parts. No new subject, or even new topic, could be included unless called for by some new need of society which had worked itself out into definite form. The piecework and patchwork method of tagging on every new "ology" to an already overcrowded curriculum, apart from its relation to human needs as expressed in the welfare of the social group, could find no place in a course of study so organically related as that of France. The

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French genius for systematic organization, as displayed in the uniformity of the elementary curriculum, has taught the pedagogic world that definite results respecting social efficiency can be accomplished only when a certain symmetry and connectedness of parts exists within the entire course of study.

The common objection raised to such unified courses of study is that they do not provide for the individual interests, character and capacities of the child. The answer made is that the public elementary schools cannot and probably should not primarily make such allowances. The large work of the people's schools is to raise to a higher level the mass of citizens who attend only these schools, not to interest themselves in a few geniuses to the neglect of the rank and file. The larger group must be protected against casualties, and this can only be done by uniformity of system and subject matter.

7. *The Controlling Influence of the Needs of Society and the Demands of the Environment.*

Moreover there is evidence for the belief that, for individual differences as expressed in individual environments, the French plan is as capable of securing a wide selection, and in fact does secure such selection, as much as any other plan. For the French authorities insist that in the program which they prescribe, it is assumed that the subject most important in the social life of a given community will be handled more at length and more thoroughly than one which has no such close relation to the immediate environment.* No school system has more completely committed itself than the French to the principle of the supreme importance of the social needs and therefore of the environmental need of its pupils, as a determining factor in the choice of the subject matter of the curriculum. This has determined the standard

*Special Reports on Educational Subjects, Vol. VII., p. 140.

of omission and admission of subjects, and it will account, for instance, for the unusual amount of motor-active subjects already discussed in this study. It is to be remarked again that this standard is largely responsible for the proper balancing and ordering of material in the French curriculum.

8. *Correlation.*

Correlation is the logical outcome of the two characteristics discussed in the preceding paragraphs. The well-known English educator, Mr. Cloudesley Brereton, has summarized the methods and matter aiding correlation in the French curriculum in his excellent study of French schools. He says:

"The moral of the whole curriculum of French primary education will be lost on English readers if they have not seen, from the brief notes on ordinary subjects, and the detailed examination of agricultural education, the way in which the subjects not only dovetail into one another but overlap, with the result of producing, not indeed confusion, but cohesion. Thus the reading lesson is drawn on for moral education, moral education in its turn draws upon the history book, history is worked in with geography, geography, through its physical features, finds its basis in science, science again is the point of departure for agriculture, which coalesces with arithmetic in the agricultural accounts, and in geometry, the practical geometry is connected with drawing, and drawing with writing, the writing is worked through the spelling and the reading book, out of which springs the recitation, which forms with it the happy hunting ground for the grammar questions. Thus the whole gamut of subjects is not only related but inter-related and finally correlated. And now perhaps it is plain how impossible it is to isolate such a subject as moral instruction, agriculture, etc., that cannot be severed from the whole curriculum without mutilating it, by cutting into at the time certain integral portions of other

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subjects, for the parts of the curriculum are not really detachable as the parts of a watch, they are members of the *corpus* of studies that make up the program of elementary education."*

*Special Reports on Educational Subjects, Vol. VII, p. 139.

CHAPTER V.

CONCLUSION.

1. The Two Controlling Standards in the Selection of Subject Matter in the Elementary Curriculum.

In the four previous chapters the curricula of the public elementary schools of the United States, England, Germany and France have been examined in order to discover the actual matter and arrangement of the subjects of instruction. This study has called attention more especially to the content of the curricula, the distribution by grades of the subjects of study, the time both actual and relative allotted to each subject, the analysis of the content of the respective subjects, and the relative importance attached to various subjects. An attempt has been made to answer the question as to what the real course of study in the elementary school is in all its various phases. The conclusions regarding various problems raised at the beginning of this investigation have been stated in the proper place. But before quitting the subject it is perhaps best to restate these conclusions and implications.

In the first place, it should not be concluded that our study assumes that the mere existence of a subject with a given time allotment in a certain curriculum of one of these school systems is proof positive of its absolute and universal validity. The idea is advanced, however, that the presence of a subject in a large number of the curricula gives some probability of its worth. For it is not fair to assume that these courses of study were aimlessly constructed without the presence of

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reason or definitely conceived guiding principles. Certainly some of the educators responsible for these courses of study, especially in France and Germany, represent the most profound thinkers in educational matters. These educational experts must have developed their courses of study upon some set of principles answering a general need of humanity, else there could not have resulted such uniformity in curricula designed to meet the needs of very different peoples. No one can fail to be impressed with the fact that the general principles which govern the selection and arrangement of the subject matter of the elementary curriculum are practically the same in the four educational systems here studied. From time to time in these pages, certain clearly perceived guiding principles have emerged, which are common more or less to all school systems, and attention has been called to them.

It is only necessary in conclusion to recall those principles which seem to constitute the most frequent criteria for the selection and omission of the subject matter of the curriculum, as well as those which serve as guides for the arrangement and distribution of such subject matter. We shall be forced to content ourselves again with the briefest statement of those principles, believing that their development has been so well displayed by others as to make them self-evident to experienced educators.* The only excuse for stating them again is because they have not seemed to be as frequently applied or implied in the American curricula as in others which have been presented.

The two fundamental questions regarding the curriculum are, first, What are the needs of the civilization in which the

*Those wishing a fuller treatment of the two controlling standards in the selection and arrangement of the subject matter of the curriculum may find it in the following publications: by Dr. John Dewey, (1) *Ethical Principles underlying Education*, (2) *The School and Society*, (3) *The Child and the Curriculum*, (4) *Primary Education Fetish* (in *Forum*, Vol. 25), (5) *Interest as related to Will*; by Dr. W. T. Harris, *Psychologic Foundations of Education*; by Prof. John S. Mackenzie, *Introduction to Social Philosophy*; by Dr. F. M. McMurry, *Advisable Omissions from the Elementary Curriculum*, and the *Basis for Them* (in *Educational Review*, May, 1904).

child is to play an active part? and second, What is the nature of the child who is to be fitted to this civilization? Briefly, education has to do with the experience of the race and the experience of the child; the activities of the race and the activities of the child; the needs of society and the needs of the child. The curriculum must, then, provide for the sociological and the psychological aspects of human life. We take up the sociological first.

Society undertakes to transmit the experience and ideals of the race and it chooses the school as an agency for this transmission. The school is fundamentally a social institution, set up by society for its own protection, i. e., for the preservation of the best of its experience and ideals. It is, in short, the function of the school to adjust or relate the individuals of the social group to the social whole of which they are parts. In this fact we find the controlling standard in the selection of the subject matter in education. Briefly stated, this principle is that the needs of society should determine the selection of the subjects and topics of study in the elementary school. These needs are discovered by observing the activities of society. What the adult group is doing and thinking in life, the child will in all likelihood have to do and think. Therefore if society controls the school it should mould the curriculum. The teacher is to make up his course of study from life's problems and needs, and he has no moral right to select his subject matter from other sources. This social standard is really what we have found as the criterion for the selection of material of instruction in the majority of curricula of the four elementary school systems just studied. Whenever we have not found it in operation we have had occasion to criticise the selection and arrangement of subjects and topics, as well as the allotment of time.

The use of this standard, like charity, must begin at home. Numerous cases of foreign curricula are therefore presented,

illustrating the attempt to permit the needs of the *immediate* environment to control in the selection and arrangement of the subjects and topics of instruction. We have had to condemn our own schools for failure in this respect. We in America have emphasized subjects and topics for their remote value rather than those which satisfy the pressing needs of the child's life and society's demand in the present. Our curriculum too much suggests that the elementary school is only a preparation for life, rather than life itself. The subject matter and method in the public elementary school must be a duplicate in miniature of the work and method of life outside the school, before the school can claim to fulfill the function for which society supports it. Examples of the monopoly of time by studies that prepare for the high school and for the college, are found in our public elementary schools where ninety-five per cent of the children do not attend high school and ninety-nine do not attend college, but are drawn into the vortex of the struggle for life with only the elementary school training. Hence the need among officials of the American elementary schools for a realization of the absolute authority of the social standard in the selection of the matter of instruction in the elementary schools.

In order that the individual may become organically related to the whole of society, he must become acquainted with the structure of the social experience and with the instrumentalities by which it is communicated from age to age. A study, to contribute to the social good, must be a brief representation of the structure of society or a type of the instrumentalities by which society carries itself along. The measure of a study is its capacity for developing, within the individual, social efficiency and insight.

The predominance of the needs of society in the selection of the subject matter is what we have referred to as the social standard. The question to be asked about any subject of in-

struction is, what is its worth in meeting the demands which society will place upon the student? Likewise, in determining the importance of a subject, how much time shall be assigned to it, and what topics shall be taught and emphasized in each subject, the questions to ask are: For how much does it count in real life? How much does the ideal citizen need this subject or topic? Is it representative of social life? If the American school could apply this strenuous standard as severely as it is found applied in some of the better curricula of the foreign schools studied on the previous pages, much waste of time might be avoided, and great unification and concentration of power result.

In the mind of the sympathetic teacher the question always arises: Shall not the nature, needs, and interests of the *child* count for something? Is society everything and the child nothing but a part of the great mass of "dumb driven cattle?" Are individuality and personality to have no freedom of growth? Must all be conformed, Chinese-like, to the general pattern set by social heritage? Is it true that "the individual withers, and the world is more and more?"

While at first thought the social standard just discussed seems to oppose the ideas championed in these questions, the conflict is only apparent. In reality, the nature of the child has had its share of influence in the arrangement if not in the selection of subject matter in the curricula outlined in the four preceding chapters. Certainly the capacity and the native interests of childhood dictate more than any other principle the location of the subjects and topics by grades in the elementary school. Society may tell us what to teach, but the child alone will dictate to us when and how to teach it.

Furthermore, if the experience and needs of society are the end points in education, it is certainly true that the experience and needs of the child are the beginning points. There can be nothing grafted on from without for which there has

been no adequate preparation in the child's experience. Psychologically, there should be nothing prescribed in a course of study which is not within the bounds of the child's capacities, experience and interests, for nothing beyond the bounds of his experience is comprehensible to the child until worked over in terms of his own experience. It is a commonly granted psychological principle today that the native powers of the child are the primary factors in his acquirement of social experience. The nature of his impulses and instincts determines very largely how we shall direct him in the acquisition of the social experience which we have discussed as the end point in education. And, in fact, they determine what phases of social life the child can assimilate at all. There are certain needs in society for which certain children can never be fitted, simply because of the lack in their natures of powers by which to apperceive the given social requirement. Again we can say that while society tells us what to teach it is the nature of the child which tells us how to teach it. For instance, while the needs of society decide for us whether grammar shall be taught, the interests, capacities and experience of the child decide how early it should be taught, and, most important of all, whether it shall be taught through the employment of rich emotional literature, or through the use of a book of abstract rules known as grammar.

In concluding this discussion of the controlling principles in the elementary curriculum, we should repeat that there are two points of view in the curriculum, the one sociological, the other psychological. The one views the curriculum as a finished product and thinks of it in terms of value; the other views it as a factor in a process, and thinks of the impulses, instincts and undeveloped powers of the child which are to be realized through the process of education by means of the study. One point of view has to do with the product and is logical; the other has to do with the process and is genetic.

The sociological, which represents the fundamental needs, activities, structure and instrumentalities of social life, should have preëminent control; the psychological, which includes the capacities, needs, interests and impulses of the individual child should have the largest consideration consistent with the social standard in the selection and arrangement of the subject matter of instruction.

2. *Conclusions Re-Stated.*

Perhaps the most vital and pressing question regarding the elementary curriculum of city schools in America is the cry arising from teachers and parents that the curriculum is overcrowded. The complaint indicates that too much is being attempted to insure successful work on the part of teacher or pupils. Confusion of mind, divided attention and nervous strain are results following overcrowding. It has been shown on previous pages that the great increase in the number of subjects of instruction and more especially the increased number of topics in the syllabi prescribed by the American school authorities may be largely responsible for this complaint. At any rate, a smaller number of time allotments and of topics in the large subjects were found to be required of teachers in other countries. The fact is that the more severe application of the social standard and the willingness to freely omit subjects and topics not in harmony with that standard, are responsible for the absence of this complaint among foreign educators. The implication to be noticed here is, of course, that the same standard and the same practice would relieve the American city schools which are now complaining of overcrowding. On the other hand, many of the schools of America have declined to so enrich the course of study as to meet the needs of society and the child. Here again our social standard will assist us.

In Table LXIII, may be found the suggestions drawn from

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this study with reference to this question. Briefly, the suggestion to those schools in America which do not count for much in the lives of the citizens near to them, would be to decrease the time allotted to the abstract subjects, whose chief recommendation is their value as mental discipline, and to increase the time allotted to those more concrete subjects which lead more directly to a comprehension of the structure, needs and activities of human life. A sufficient mental discipline may be furnished by studies which develop the ability to participate in human affairs. Moreover, we should suggest from the foregoing study that there is more in life than intellectuality. The volitional, the emotional, the æsthetic, the physical count for very much more in the lives of the average citizen than does the intellectual aspect of life. Intellectuality is a means to an end with most people and not an end in itself. We wish to know in order to *do*. Doing and not abstract thinking has constituted and will for some time constitute the employment of the great majority of all persons attending the public elementary schools of America.

The lack of organic unity in the American course of study presents the one striking contrast between the curriculum of our country and some others presented in this paper. Subjects are grafted on to the elementary school course of study from the high school without previous preparation for them in the earlier primary grades, apparently on the assumption that the elementary course is a mechanical mass of unrelated parts. Subjects are dropped after a year or two, or are begun at any point in the eight years. The psychological demand for organic relations, unity and symmetry is almost ignored in the American school curriculum. The child is not introduced to a symmetrical whole, but to an aggregation of isolated parts, broken into by unreasonable gaps of time allotments and lapses of months and years of recitation time.

This chaos occasioned by the lack of organic relation be-

tween the subject matter of one grade and that of another, would seem to find its ultimate explanation in the assumption on the part of the curriculum builders that the elementary school is a college preparatory school. Educators of other nations claim that the public elementary school is not a school whose primary business is the preparation of students for college. As a matter of fact, scarcely one per cent of those attending the school ever attend college. Hence it is thoroughly undemocratic to allow a one per cent minority to control a ninety-nine per cent majority. The foreigner intimates that a curriculum built on this plan is despotic to a degree not found in monarchical governments. We retort that the foreign plan of erecting one school for those who attend a college and a different one for those who may not attend college is a sanction if not a guarantee of the caste system.

We further compliment our own system by asserting its claim to offer an equal opportunity to all, which is undoubtedly sound democracy. To the wisdom of this principle England would assent, for her curriculum like ours offers both those subjects that may be serviceable for immediate life and also a list which prepare for college, with the privilege on the part of the student of electing which he shall pursue. France and Germany practically oppose such a plan. They claim that the organic unity of the whole curriculum is destroyed by the attempt to incorporate the two aims, and that the subject matter which leads directly into social life leads away from a preparation for college life, and vice versa. Therefore, they erect the public elementary school to do one thing and another type of school to do the other.

In a study of elementary schools which aims to state conclusions contained in the facts investigated and not to pursue a personal and opinionated discussion of those conclusions, these two opposing ideals are left to the consideration of the

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reader. It would seem that while all four countries claim to be aiming at equality of opportunity to the pupil and organic relation in the curriculum, England and America do probably succeed more in accomplishing the former end, while Germany and France succeed in the latter end.

The absence of any central authority which would serve as a unifying agency between the different city school courses of study is one source of waste in the American schools. There is no guarantee of uniformity even between two schools only a short distance apart. Railway communications have connected the individual, social and intellectual life of adjacent communities; the isolation of educational life as provided for in the schools still remains a glaring anachronism in our civilization. Some modification of the semi-bureaucratic system of England, which would insure unity among the various cities within a given state, has been suggested. Such a central authority should still make due allowance for local control and environmental peculiarities.

The absence of the teaching of the Bible or morals in our schools is regarded as a weakness by many foreigners. As regards Bible teaching, it has been suggested that either Germany's or England's example might be followed by us without detriment to our democratic ideals. In these countries the parents are allowed to withdraw their children during the recitation in Scripture when conducted by a teacher not of their own choice. In this connection might be mentioned the correlative need of opening exercises. Doubtless a systematic course in Bible teaching would greatly improve this too often worthless exercise.

The English practice of providing a course of study partly required and partly elective, or the French practice of having electives in certain subjects in the higher grades, furnishes opportunity for those educators who are interested in the development of the exceptional child, the genius or the dull-

ard, to provide for individuality. The question of electives needs and is receiving careful consideration in America at present. It would be profitable for us to make a thorough study of the practice of England and France before settling upon a final course of action in this respect.

The need of a sub-primary class, such as the English or French infant schools, has been felt to be a want in American education. The gap between the home and the school demands this sub-primary class. Besides the plan suggested by France and England, the American kindergarten offers additional ideas. The German practice of requiring and directing home study makes a partial contribution in this direction. The good service rendered by such a system of schools, having a proper course of study, has been pointed out in connection with the schools of France and England.

The brief time of the daily school sessions in America has been compared with that of other countries, with a view to ascertaining if there is any basis of fact for excuse of our practice. This comparison brought out a strong probability that the American child could and should spend more time in school than he does in some of the city schools herein investigated. This need of more recitation time is suggested, though not vindicated, by the poor training received by the average teacher as contrasted with that of teachers in other countries, and also by the absence of any single definite aim toward which the elementary school in general, and the curriculum in particular, is directed in the United States. For it is usually conceded that a well-trained teacher with a clearly conceived aim would not require so much of the child's time in school as would a poorly trained teacher in an aimless school.

From time to time in this study occasions have arisen for criticism of the usual American elementary curriculum with respect to what are known as formal or abstract studies. The

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time allotted to the formal as represented by such studies as arithmetic, grammar, reading, writing and language study, *per se*, in many of our public elementary school systems is doubtless too great. In other countries the same subjects seem to have been taught with more success by giving the formal through the rich content subjects. This is partly due to the fact that too great a distinction seems to exist between the theoretical and the practical in the American mind. A feeling prevails that the purely theoretical, the symbolical and the abstract are to be placed off on one side, as against the useful, the constructive and the æsthetic on the other. In our social life we have made distinctions upon this basis, dividing men off as workers and thinkers. The distinction is purely hypothetical. Men do not learn that way, and men do not live that way. In human life we are all both doers and thinkers,—the one because we are the other.

This false conception probably assists in accounting for the fact that provision is not made for the teaching of the formal through other more concrete subjects, as in other countries. Why can not we, too, teach the formal side of language through emotional literature; formal science and mathematics through history, handwork, geography, etc.? Or, could not each of these five last-named subjects be enriched and the time devoted to them shortened by applying more of the constructive forms of school work to their solution? Why could not the child be taught to begin with the social activities of the present and work back in the casual sequence to the correlative fields of history, science, mathematics, or into any other department of study?

One answer which this investigation makes to these questions is that the distribution and time allotments of the subjects are such that teaching the formal through such rich subjects as history, geography, handwork, nature study, etc., is

practically impossible in America at present. There must be a rearrangement of time allotments in the elementary curriculum before such is possible. History and handwork are delayed too long, nature study and geography lose in time assignments too early, literature is not sufficiently uniformly distributed to allow the practice of others to be carried out by us. This deficiency is one which demands the serious consideration of the American educator.

Correlation of subjects also is largely impossible under the present arrangement of the course of study, since subjects which would lend themselves best to correlation are not taught, or are not given prominence, during the same school year.

3. *Time Allotments in the Curricula of Schools of the United States, England, Germany and France, Summarized into One Composite Table.*

Several problems were set for this investigation in the outset, the conclusion and implications of which can best be shown in tabular form. The relative importance attached to subjects, the proper balancing of the various subjects of instruction, the relative time devoted to each subject, and the grade in which each is taught, are among the matters which we shall now attempt to summarize by tables. Besides giving information upon these subjects the tables will emphasize in a graphic way many of the facts already discussed in this chapter.

The two tables in question are summaries of all the time allotment tables heretofore furnished. Table LXI. is a summary of the ten American time allotment tables, II.-XI.; of the ten English tables, XXVI.-XXXV.; of the ten German tables, XLV.-LIV.; and of the Paris table, LX. Table LXII. is a summary of the courses of study of the elementary schools of New York, London, Berlin and Paris, found in Tables II., XXVI., XLV. and LX., respectively. We have here the actual

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practice of the elementary schools of perhaps the four most progressive cities of the world, as a basis of comparison upon which to judge again the curriculum of our own country.

While, as has been repeatedly said, such a composite curriculum is somewhat hypothetical on account of the absence of a definitely stated aim, yet it cannot be denied that these tables contain the facts of the practical operation of the elementary curriculum in the cities correlated. The suggestions for the improvement of the content and arrangement of the subject matter in the American curriculum which arise from these tables are worthy of consideration, so long as it is granted that real facts are more useful than ideal aims, however desirable. To know what people are doing and how they are doing it, is worth more to men whose business it is to bring things to pass than what men are aiming at and what they would like to do.

These two tables should be accorded whatever weight is to be attached to the results of careful study made by numerous experts who are laboring with such educational problems as, in the main, are common to us all. While such tables should not be given final authority until adopted and tested by American educational needs, yet, as has already been shown, the largest and most influential principles which control the selection and arrangement of the American curriculum, operate with equal force in the school systems of other countries, the needs of the majority of children who fill the elementary schools being much the same in all these countries. These common needs call for the application of universal principles, and in a sense add to the worth of Tables LXI. and LXII., as suggestive summaries. We believe for these reasons that they possess considerable practical importance to the American educator.

TABLE LXI.—Showing the Average Recitation Time in Minutes per Week devoted to Each Subject in Each Grade of the Public Elementary Schools of the Ten Cities of the United States, of England, of Germany and of the City of Paris; also the Average Percentage of Total Time given Each Subject.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|--|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 Opening Exercises, Religion and Morals | 98 | 104 | 105 | 112 | 115 | 115 | 120 | 94 | 7.6 |
| 6 Language ¹ | 569 | 666 | 649 | 641 | 549 | 537 | 474 | 312 | 39 |
| 8 Arithmetic | 204 | 215 | 235 | 275 | 269 | 271 | 252 | 177 | 16.8 |
| 9 Geography | 45 | 47 | 76 | 108 | 108 | 105 | 100 | 81 | 5.9 |
| 10 History | 24 | 26 | 34 | 65 | 81 | 114 | 109 | 85 | 4.7 |
| 14 Nature Study ² | 35 | 36 | 64 | 61 | 62 | 76 | 87 | 63 | 4.3 |
| 16 Physical Training | 114 | 108 | 115 | 102 | 107 | 105 | 102 | 51 | 7.1 |
| 17 Drawing | 73 | 93 | 97 | 98 | 113 | 111 | 128 | 101 | 7.2 |
| 18 Music | 69 | 62 | 71 | 72 | 72 | 72 | 79 | 56 | 4.9 |
| 19 Manual Training | 6 | 38 | 38 | 43 | 57 | 60 | 75 | | |
| 20 Sewing | (46) | (93) | (126) | (131) | (131) | (133) | (154) | (161) | (8.6) |
| Total | 1237 | 1398 | 1484 | 1583 | 1533 | 1566 | 1626 | 1020 | |

Average Percentage of Recitation Time devoted to Each Subject in Each Grade per Week in the Public Elementary Schools of the Ten Cities of the United States, of England, of Germany and of the City of Paris.

| | | | | | | | | |
|-------------------------------|-------|-------|-------|-------|-------|-------|------|--------|
| 1 Opening Exercises | 8 | 7.4 | 7.1 | 7.1 | 7.5 | 7.3 | 7.9 | 9.3 |
| 6 Language | 45.9 | 47.3 | 43.9 | 40.6 | 36 | 34.2 | 31 | 30.6 |
| 8 Arithmetic | 16.5 | 15.3 | 15.8 | 17.4 | 17.6 | 17.3 | 16.5 | 17.4 |
| 9 Geography | 3.7 | 3.4 | 6.2 | 6.8 | 7 | 6.7 | 6.6 | 8 |
| 10 History | 2 | 1.9 | 2.3 | 4.2 | 5.3 | 7.3 | 7.1 | 8.4 |
| 14 Nature Study | 2.9 | 2.8 | 4.3 | 3.9 | 4.1 | 4.9 | 5.7 | 6.2 |
| 16 Physical Training | 8.2 | 7.9 | 7.8 | 6.6 | 7 | 6.7 | 6.7 | 6 |
| 17 Drawing | 5.9 | 6.6 | 6.6 | 6.2 | 7.4 | 7.1 | 8.4 | 10 |
| 18 Music | 5.6 | 4.4 | 4.8 | 4.6 | 4.7 | 4.6 | 5.2 | 5.5 |
| 19 Manual Training (for Boys) | .5 | 2.7 | 2.6 | 3.2 | 3.7 | 3.8 | 5 | 7 |
| 20 Sewing (for Girls) | (3.7) | (6.6) | (8.5) | (8.3) | (8.6) | (8.5) | (10) | (15.8) |

¹The average is necessarily too low, as this subject is entirely omitted in the American schools, although that system was included in reducing the averages.

²Language includes grammar, composition, literature, memorizing (or recitation), reading, writing, spelling, dictation.

³Nature study includes elementary science, lessons on common things and object lessons.

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TABLE LXII.—Showing the Average Number of Minutes of Recitation Time per Week devoted to Each Subject in Each Grade in the Public Elementary Schools of New York, London, Berlin and Paris, and the Average Percentage of Total Time given to Each Subject.

| Grade | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|--|------|------|------|-------|-------|-------|-------|-------|------|
| 1 Opening Exercises, Religion, or Morals | 117 | 118 | 119 | 132 | 134 | 132 | 142 | 142 | 8.86 |
| 2 Writing | 129 | 158 | 183 | 88 | 87 | 80 | 55 | 47 | 7 |
| 3 Language ¹ | 428 | 455 | 446 | 408 | 399 | 388 | 366 | 365 | 27.8 |
| 4 Arithmetic ² | 186 | 194 | 224 | 225 | 217 | 218 | 221 | 200 | 14.4 |
| 5 Geography | 35 | 41 | 47 | 105 | 95 | 94 | 85 | 69 | 4.9 |
| 10 History ³ | 38 | 28 | 31 | 60 | 82 | 91 | 91 | 65 | 4.4 |
| 14 Nature Study ⁴ | 82 | 89 | 81 | 88 | 81 | 99 | 121 | 145 | 6.7 |
| 16 Physical Training | 170 | 156 | 138 | 136 | 117 | 118 | 121 | 120 | 9.2 |
| 17 Drawing ⁵ | 71 | 86 | 100 | 101 | 102 | 107 | 126 | 141 | 7.1 |
| 18 Music | 65 | 57 | 75 | 75 | 72 | 77 | 81 | 85 | 5 |
| 19 Manual Training (for Boys) | 55 | 65 | 65 | 64 | 70 | 69 | 50 | 45 | 4.1 |
| 20 Sewing | (28) | (58) | (93) | (101) | (104) | (112) | (149) | (170) | (7) |
| Total | 1376 | 1450 | 1509 | 1483 | 1456 | 1473 | 1405 | 1454 | |

Average Percentage of Recitation Time devoted to Each Subject in Each Grade per Week in the Public Elementary Schools of New York, London, Berlin and Paris.*

| | | | | | | | | | |
|---------------------------------|------|------|------|------|------|------|------|------|--|
| 1 Opening Exercises | 8.6 | 8.2 | 7.9 | 9 | 9.3 | 9 | 10 | 9.8 | |
| 2 Writing | 9.4 | 10.9 | 12 | 6 | 6 | 5.5 | 4 | 3.3 | |
| 3 Language | 31.3 | 31.4 | 29.6 | 27.6 | 27.6 | 26.4 | 26 | 25.2 | |
| 4 Arithmetic | 13.6 | 13.4 | 14.9 | 15.2 | 15 | 14.8 | 15.7 | 13.8 | |
| 5 Geography | 2.6 | 2.8 | 3.1 | 7.1 | 6.6 | 6.4 | 6 | 4.8 | |
| 10 History | 2.8 | 2 | 2.1 | 4.1 | 5.7 | 6.2 | 6.5 | 6.6 | |
| 14 Nature Study | 6 | 6.2 | 5.4 | 6 | 5.6 | 6.8 | 8.6 | 10 | |
| 16 Physical Training | 12.4 | 11 | 9.2 | 9.2 | 8.1 | 8 | 8.6 | 8.3 | |
| 17 Drawing | 5.3 | 6 | 6.6 | 6.8 | 7.1 | 7.3 | 9 | 9.7 | |
| 18 Music | 4.8 | 4 | 5 | 5.1 | 5.1 | 5.3 | 5.8 | 5.9 | |
| 19 Manual Training ⁷ | 4 | 4.5 | 4.3 | 4.3 | 4.8 | 4.7 | 3.2 | 3.1 | |
| 20 Sewing | 2.1 | 4 | 6.3 | 6.8 | 7 | 7.7 | 10.6 | 11.2 | |

¹Language includes grammar, literature, composition, dictation, reading, spelling and memorizing gems.

²Paris and Berlin give geometry in the three upper grammar grades, while New York and London give a small amount of time to algebra in the same grades. The time for these subjects in each case, except in New York, is not included in these figures.

³Civics is included with history in New York and Paris, but is not referred to in the London and Berlin tables.

⁴Nature Study includes elementary science, object lessons, and common things.

⁵In averaging the time for drawing, sixty minutes of the time assigned

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in the New York schools under drawing and constructive work were allowed for drawing and the remainder for manual training.

[¶]The eighth grade average in this table is partly hypothetical. Paris has no eighth grade, but its seventh grade was repeated in getting the eighth grade average.

[¶]The low percentage for manual training for boys is due to the absence of that subject in the Berlin tables. The actual average, therefore, would be raised considerably if the total had been divided by three instead of four.

5. *A Suggested Curriculum for Elementary Schools.*

In order to summarize some of the facts believed to be the most valuable in the previous pages, this discussion is concluded by a suggestive program of studies. Table LXIII. displays such an epitome of the best that has been developed in this study, both of fact and of theory. It is an attempt to organize all that has been heretofore mentioned into an organically related curriculum. The table is more nearly an embodiment of the best found in the various curricula given in the first four chapters, than of the actual summaries of these curricula. It is not to be taken literally, but merely as a suggestive scheme, or an approximate construction of a course of study for an ordinary city school in America. One of the principles most vehemently urged in these pages, would call for the readjustment of this ideal to the needs of individual localities. Yet it is sometimes worth while to have an ideal, even if the actual product constructed by it scarcely resembles it.

The patience of the reader will not be exhausted by repetition of the various contingencies necessary to a proper understanding of this ideal plan. Neither is it deemed necessary to explain in detail why each time allotment is made, nor why the allotments are different from those of any single previous table. It is enough to say that to the mind of the writer the needs of society (using the word in its broadest sense) within the probable environment of the child are taken to be a safe criterion of measurement of the place of any subject in the elementary public school curriculum. The following explanations, however, of the point of view taken with reference to

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TABLE LXIII.—Showing the Number of Minutes per Week and the Percentage of Recitation Time for Each Study in Each Grade suggested as a Basis of a Proposed Time Table.

| Grade. | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | Pct. |
|-----------------------------------|------|------|------|------|------|------|------|-------|------|
| 1 Scripture, Opening Exercises | 120 | 130 | 140 | 145 | 150 | 150 | 150 | 150 | 10 |
| 2 Reading | 240 | 280 | 210 | 145 | 60 | 60 | 60 | | |
| 3 Writing | 60 | 75 | 112 | 116 | | | | | |
| 4 Spelling | 48 | 52 | 56 | 87 | 60 | | | | |
| 5 Grammar | | | | | | 45 | 60 | 60 | 27.5 |
| 6 Literature | | | | 72 | 90 | 120 | 120 | 195 | |
| 7 Oral & Written Composition | 72 | 78 | 112 | 87 | 90 | 75 | 60 | 45 | |
| 8 Arithmetic | 120 | 130 | 140 | 145 | 225 | 225 | 225 | 150 | 12.5 |
| 9 Geography | 124 | 52 | 70 | 116 | 150 | 150 | 150 | 150 | 7.5 |
| 10 History & Civics | 60 | 65 | 70 | 72 | 150 | 150 | 150 | 180 | 7.5 |
| 14 Nature Study | 120 | 130 | 140 | 101 | 75 | 75 | 75 | 75 | 7.5 |
| 16 Physical Training ¹ | 60 | 65 | 70 | 72 | 150 | 150 | 150 | 150 | 7.5 |
| 17 Drawing | 48 | 52 | 70 | 72 | 75 | 75 | 75 | 75 | 5 |
| 18 Music | 108 | 91 | 70 | 72 | 75 | 75 | 75 | 75 | 5 |
| 19 Hand-work | 120 | 130 | 140 | 145 | 150 | 150 | 150 | 195 | 10 |
| Total | 1200 | 1300 | 1400 | 1450 | 1500 | 1500 | 1500 | 1500 | |

Average Percentage of Recitation Time devoted to Each Subject in Each Grade.

| | | | | | | | | | |
|----------------------|----|----|----|----|----|----|----|----|--|
| 1 Scripture, etc. | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| 2 Reading | 20 | 20 | 15 | 10 | 4 | 4 | 4 | | |
| 3 Writing | 5 | 5 | 8 | 8 | | | | | |
| 4 Spelling | 4 | 4 | 4 | 6 | 4 | | | | |
| 5 Grammar | | | | | | 3 | 4 | 4 | |
| 6 Literature | | | | 5 | 6 | 8 | 8 | 13 | |
| 7 Composition | 6 | 6 | 8 | 6 | 6 | 5 | 4 | 3 | |
| 8 Arithmetic | 10 | 10 | 10 | 10 | 15 | 15 | 15 | 10 | |
| 9 Geography | 2 | 4 | 5 | 8 | 10 | 10 | 10 | 10 | |
| 10 History, etc. | 5 | 5 | 5 | 5 | 10 | 10 | 10 | 12 | |
| 14 Nature Study | 10 | 10 | 10 | 7 | 5 | 5 | 5 | 5 | |
| 16 Physical Training | 5 | 5 | 5 | 5 | 10 | 10 | 10 | 10 | |
| 17 Drawing | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 18 Music | 9 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | |
| 19 Hand-work | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 13 | |

¹Includes hygiene.

the content and distribution of certain subjects of instruction are necessary for a clear understanding of the various time allotments in Table LXIII.

(1) Reading should be taught by the use of literary readers in the second, third and fourth grades, and if taught in the

grammar grades, geographical and historical readers might be used with profit.

(2) Writing should cease *per se* by the completion of the fourth grade.

(3) Spelling is always to be taken from the oral, written and printed work, and should not receive a special assignment after Grade V., but should be taught in connection with other subjects.

(4) Grammar should be inductively developed from the beginning of the third grade. A text might be introduced at the beginning of the sixth grade.

(5) Literature should be taught in connection with reading through the fourth grade. It should be a separate subject from the beginning of the fourth grade.

(6) Composition work should begin as early as possible and increase with each advancing grade in time allotment.

(7) Arithmetic should deal with the quantitative aspect of social activities as early as the child can do concrete work, i. e., from the first.

(8) Home geography should be studied in connection with nature study, school excursions, school gardens, weather observations, etc., in the first and second grades. A text on home geography should be given during the third year. The regular elementary and advanced courses in geography should then be taken.

(9) In history, historical and biographical stories should be given in Grades I. and II. Local history should be used in the third grade, and in the upper grades the usual historical works.

(10) Civics is a development connected with history and should increase in importance in the upper grades.

(11) Physical culture does not include recess periods, which should be several in number. Organized games are presupposed in these recess periods.

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(12) Handwork for boys and that for girls need not contain the same subject matter, and their recitation periods in this subject need not occur at the same time.

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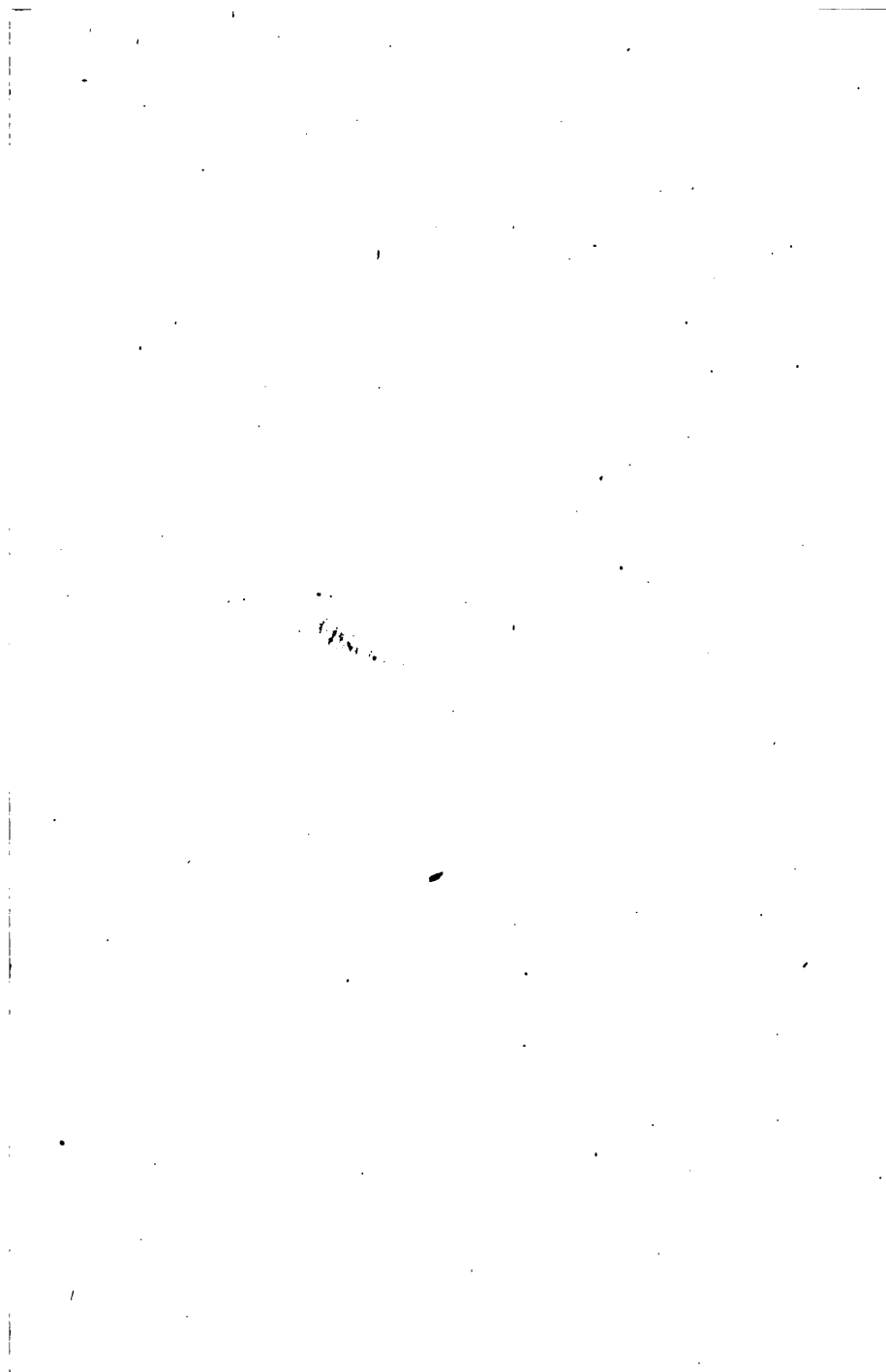
BRUCE RYBURN PAYNE.

A.B., Trinity College (Durham, N. C.), 1896; A.M., 1902; Southern Scholar, Teachers College, 1902-03; Diploma in Education, Teachers College, 1903; A.M., Columbia University, 1903; Special Graduate Scholar, and Southern Scholar, Teachers College, 1903-04.

1. The first part of the document is a list of names and addresses of the members of the committee.

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